Laboratories of Innovation:

Building and Using Evidence in Charter Schools



IBM Center for The Business of Government

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Patrick Lester Social Innovation Research Center



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FOREWORD

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *Laboratories of Innovation: Building and Using Evidence in Charter Schools,* by Patrick Lester, director of the Social Innovation Research Center.

Charter schools have been a part of the landscape of U.S. elementary and secondary education for more than two decades, enrolling about five percent of K-12 public school students across the country. They have been touted as providing choice to parents and students in the provision of education, and they have been long promoted as a key source of innovation in educational performance techniques with the support of governments that provide their "charter" status.

In this study, IBM Center Visiting Fellow Patrick Lester examines these premises and finds challenges in fulfilling them. Based on validated evidence, the author offers recommendations on how to make charter schools more effective in pioneering and disseminating innovations to produce widespread gains in educational achievement.



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We hope this report provides actionable insights to education policy makers at the federal, state, and local levels.

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EXECUTIVE SUMMARY

As originally envisioned, charter schools were intended to be laboratories of innovation.

Offering broad flexibility in exchange for performance-based accountability, charter schools are well-positioned to test, validate, and adopt new practices in a public school environment.



This report finds that, to date, many charter schools have only partly delivered on this mission. While there are many pockets of excellence in the sector, there appears to be less innovation than originally anticipated. One possible solution to address this challenge is greater public investment in research and dissemination of charter-related education practices. Combining such research and communication with greater inducements for charter schools to adopt proven practices could produce widespread performance gains across the sector.

This report reviews the options for making charter schools more innovative and evidencebased. Highlights include the following challenges and opportunities:

- Some Charter Schools Have Demonstrated Substantially Positive Effects on Student Achievement: While the overall performance of charter schools is comparable to traditional public schools, many have achieved substantially better performance. The No Excuses charter model, which is principally used in low income urban settings, has demonstrated positive effects on student achievement, particularly when implemented by high-capacity charter networks like the Knowledge is Power Program (KIPP). Charter authorizers have also played a significant role in raising the performance of charter schools by weeding out low-performing schools.
- The Performance of Most Charter Schools Has Been Less Impressive: Other charter schools are typically no better, and sometimes worse, than comparable traditional public schools when judged according to academic growth and achievement. Much of the charter school movement does not appear to have been very innovative in testing and adopting new practices, focusing instead on a well-established set of common practices.
- School Choice and Existing Accountability Mechanisms Do Not Appear to Be Driving Widespread Academic Improvement in the Sector: Charter advocates often argue that school choice and results-based accountability create the necessary incentives for academic improvement. However, research on charter schools indicates that the choices of parents and students are weakly linked to academic growth and that the overall impact of charter choice is mixed. Accountability mechanisms appear to be effective at weeding out the

lowest-performing charter schools, but their impact on schools operating above that level appears to be limited. Together, these two mechanisms do not appear to be creating strong enough incentives for most charter schools to improve student outcomes.

- Existing Incentives for Charter Schools to Improve Student Achievement Should Be Strengthened: States and other appropriate authorities should consider strengthening existing incentives for improved academic achievement. Three potential approaches for doing this include:
 - strengthening school choice by providing better information to parents and students about charter school performance, including information about academic growth compared to nearby schools. Such strategies should be rigorously evaluated to determine their effectiveness;
 - strengthening existing accountability measures. Some charter authorizers are more aggressively encouraging the replication of high-quality schools based on their performance, including growth in student achievement. More should do so; and
 - offering performance-based payment bonuses to charter schools that: (1) achieve better student outcomes; or (2) disproportionately serve higher-need or higher-cost populations, such as students with special needs, students with behavior problems, and English language learners. Such bonuses should be rigorously evaluated before they are widely adopted, however, to ensure that they are incentivizing improved student outcomes and not producing perverse incentives, such as cream-skimming easier-toserve students.
- Charter Schools Should Be Encouraged to Test and Adopt More Evidence-based Practices: Probably owing to the controversies surrounding them, most research on charter schools has been focused on their overall effectiveness, not individual practices. Schoollevel studies may help inform the political debate, but they do not do enough to help these schools improve. To promote such improvement, states and the U.S. Department of Education should provide more grants for research on effective charter school practices.

Following the lead of the U.S. Department of Education, states should also incorporate evidence preferences into grants to charter schools. Efforts to share best practices, such as those that are already encouraged by the federal Charter School Program, should also focus on practices that are evidence-based.

Charter authorizers should also encourage more testing and adoption of evidence-based practices in their periodic reviews. In doing so, however, they should continue to respect charter school autonomy, allowing them to choose which evidence-based practices are most appropriate for their schools.

History and Growth of the Charter School Movement

Charter schools are independent public schools that have been granted permission to operate by a state-approved charter authorizer, subject to periodic performance reviews. Although charter laws vary greatly by state, common characteristics include: (1) substantial autonomy from state and local regulations; (2) accountability for improved student outcomes; and (3) public school choice, which is believed to create market-based incentives to maintain and improve school quality.¹

The charter school movement began in the United States in Minnesota, which enacted the first law authorizing them in 1991. The idea spread rapidly to other states over the rest of the decade. In 1994, Congress created the federal Charter School Program, which helps fund state efforts to launch new charter schools.² No Child Left Behind incorporated limited school choice provisions among its sanctions for failing to meet adequate yearly progress under its accountability framework.³ The Obama administration provided charters a further boost when it included charter conversion as one of its four main turnaround options ("restart") in the School Improvement Grants program. Race to the Top also encouraged states to remove charter school caps.

Throughout this period, philanthropic organizations like the Bill and Melinda Gates Foundation and the Walton Family Foundation played a major supporting role, including direct financial support for many schools and for nonprofit advocacy organizations.⁴ Throughout most of their existence, charter schools have also drawn opposition from teachers' unions, which view them as a threat to traditional public school funding and to collective bargaining requirements.⁵

After the charter school idea first gained traction in the early 1990s, the number of schools grew dramatically. By 1999, there were an estimated 349,714 students enrolled in over 1,500 charter schools in 36 states and the District of Columbia. By the 2016–2017 school year, those numbers had grown to more than 3 million students in over 6,900 charter schools in 42 states and the District of Columbia.⁶

The majority of schools are located in nine states: Arizona, California, Colorado, Florida, Michigan, New York, Ohio, Pennsylvania, and Texas.⁷ The heaviest concentrations are in large urban school districts in cities like New Orleans, San Antonio, Detroit, and Philadelphia.⁸ Nationally, charter schools now enroll about five percent of the nation's K-12 public school students.⁹

^{1.} Institute of Education Sciences. "Evaluation of the Impact of Charter School Strategies." June 2010. https://ies.ed.gov/ncee/projects/evaluation/choice_charter.asp. Gawlik. Marytza A. "The U.S. Charter School Landscape: Extant Literature, Gaps in Research, and Implications for the U.S. Educational System." April 2016. https://files.eric.ed.gov/fulltext/EJ1098696.pdf.

^{2.} Congress created it as part of the reauthorization of the Elementary and Secondary Education Act. See: Institute of Education Sciences. "Evaluation of the Impact of Charter School Strategies." June 2010. https://ies.ed.gov/ncee/projects/evaluation/choice_charter. asp.

^{3.} CRS. "Accountability Issues and Reauthorization of the Elementary and Secondary Education Act." February 7, 2011. p. 11. https://www.everycrsreport.com/reports/R41533.html.

^{4.} Finn, Chester E. Jr., et al. "Philanthropy and the Growth of Charter Schools." Stanford Social Innovation Review, October 14, 2016. https://ssir.org/articles/entry/philanthropy_and_the_growth_of_charter_schools.

^{5.} Toppo, Greg. "Teachers' Union Considers Hard Line on Charter Schools." USA Today, July 3, 2017. https://www.usatoday.com/ story/news/2017/07/04/teachers-union-considers-hard-line-charter-schools/448774001/

National Alliance for Charter Schools, "Estimated Charter Public School Enrollment, 2016-17." January 2016. http://www.publiccharters.org/sites/default/files/migrated/wp-content/uploads/2017/01/EER_Report_V5.pdf
Ibid.

Gawlik, Marytza A. "The U.S. Charter School Landscape: Extant Literature, Gaps in Research, and Implications for the U.S. Educational System." April 2016. https://files.eric.ed.gov/fulltext/EJ1098696.pdf; Prothero, Arianna. "The Evolution of the 'Chartered School'." *Education Week*, June 13, 2016. https://www.edweek.org/ew/articles/2016/06/03/the-evolution-of-the-chartered-school.html.
Ibid.

Evidence Building in Charter Schools

During the quarter century of their existence, charter schools have been the focus of substantial evaluation. However, probably owing to the political controversies that surround them, most of this research has focused on their overall effectiveness at the school level, with much less evaluation of individual charter school practices.

Research on School-level Effectiveness

At the school level, research suggests that charter schools perform about the same as traditional public schools overall.¹⁰ However, this research has also found substantial variation in charter school performance, primarily due to the following factors:

• **Student Characteristics:** In general, studies have found that charter schools serving student populations that are predominantly urban, poor, and African American or Hispanic are more likely to produce positive student outcomes.¹¹ Suburban charter schools, by contrast, have generally not outperformed their suburban traditional public school counterparts.¹²

The better outcomes in urban settings may be due to the more frequent use of the No Excuses model, a strategy that features strict behavior codes, extended instruction time, and tutoring for low-performing students.¹³ Research has typically found that No Excuses charter schools improve academic achievement, although with stronger effects on mathematics than reading.¹⁴

- Participation in Charter Networks: Studies by the Center for Research on Education Outcomes (CREDO) at Stanford University have found a modest, but positive, association between student outcomes and schools that are run by large nonprofit charter management organizations (CMOs).¹⁵ CMOs vary substantially in their strategies and impacts, however.¹⁶ Some studies have found stronger positive effects for specific high-performing CMOs like KIPP.¹⁷
- Regulatory Oversight: State-focused research by CREDO has found substantial variation in charter school outcomes between the states.¹⁸ Some studies suggest substantial variation among cities, including stronger results in places like New York City.¹⁹

^{10.} Institute of Education Sciences. "Evaluation of the Impact of Charter School Strategies." June 2010. https://ies.ed.gov/ncee/projects/ evaluation/choice_charter.asp; Cohodes, Sarah. "Charter Schools and the Achievement Gap." *The Future of Children*, Fall 2017. https:// futureofchildren.princeton.edu/sites/futureofchildren/files/resource-links/charter schools compiled.pdf.

^{11.} Center for Research on Education Outcomes. "Urban Charter School Study." 2015. http://urbancharters.stanford.edu/index.php; Prothero, Arianna. "Urban Charter Schools Outperform District Peers, CREDO Study Says." *Education Week*, March 18, 2015. http:// blogs.edweek.org/edweek/charterschoice/2015/03/urban_charter_schools_outperform_district_peers_credo_study_says.html.

^{12.} Dynarski, Susan. "Urban Charter Schools Often Succeed. Suburban Ones Often Don't." *The New York Times*, November 20, 2015. https://www.nytimes.com/2015/11/22/upshot/a-suburban-urban-divide-in-charter-school-success-rates.html.

^{13.} Bean, Max. "The No-excuses Charter School Movement." *Dewey to Delpit Blog.* http://edcommentary.blogspot.com/p/no-excuses-charter-movement.html.

^{14.} Cheng, Albert et al, "No Excuses Charter Schools: A Meta-Analysis of the Experimental Evidence on Student Achievement." August 2015. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2652401.

^{15.} Center for Research on Education Outcomes. "Charter Management Organizations." 2017. https://credo.stanford.edu/pdfs/CMO%20 FINAL.pdf.

^{16.} Mathematica Policy Research. "Charter-School Management Organizations: Diverse Strategies and Diverse Student Impacts." January 30, 2012. https://www.mathematica-mpr.com/our-publications-and-findings/publications/charterschool-management-organizations-diverse-strategies-and-diverse-student-impacts.

^{17.} Peltason, Emily and Margaret Raymond. "Charter School Growth and Replication." January 2013. http://credo.stanford.edu/pdfs/ CGAR%20Growth%20Volume%201.pdf; Mathematica Policy Research. "As the KIPP Network Grows, Positive Impacts Are Sustained." September 17, 2015. https://www.mathematica-mpr.com/news/kipp-i3-scale-up.

^{18.} Center for Research on Education Outcomes. "National Charter School Study: 2013." June 2013. http://credo.stanford.edu/documents/NCSS%202013%20Final%20Draft.pdf.

^{19.} Center for Research on Education Outcomes. "Charter School Performance in New York City." October 2017. https://credo.stanford.edu/pdfs/nyc_report%202017%2010%2002%20FINAL.pdf; Dobbie, Will and Roland Fryer, "Getting Beneath the Veil of Effective Schools: Evidence from New York City." December 2011. http://www.nber.org/papers/w17632; MDRC. "Success Academy Charter Schools Evaluation." https://www.mdrc.org/project/success-academy-charter-schools-evaluation#overview; MDRC. "New York City Small Schools of Choice Evaluation." https://www.mdrc.org/project/new-york-city-small-schools-choice-evaluation#overview.

Much of this variation appears to be due to varying levels of regulation—particularly the active closure of low-performing schools.²⁰ A comprehensive 2013 review by CREDO found that "the charter sector is getting better on average, but not because existing schools are getting dramatically better; it is largely driven by the closure of bad schools."²¹

The effects of regulation on schools operating above that level is less clear. A 2010 study sponsored by the Institute of Education Sciences (IES) found no effects associated with other regulatory measures, such as the level of school autonomy in setting school policies, accountability practices, or the type of charter school authorizer.²² However, some states and charter authorizers are adopting new laws and practices that may encourage the replication of higher quality charter schools.²³ If successful, these efforts could improve the effectiveness of such regulation.

Other factors that do not appear to be as strongly linked to improved academic performance in charter schools include:

• **School Choice:** Charter advocates frequently cite school choice as a driver of improved academic performance, primarily through market-based incentives.²⁴ However, the evidence to support this belief is mixed to poor.²⁵

Factors that most contribute to parent and student choices include distance to the school, composition of the student body, and extra-curricular offerings.²⁶ High-income households are more likely to emphasize school test scores, but such choices are largely associated with the presence of high-achieving peers, not a school's ability to generate academic growth (i.e., the value-add in student achievement).²⁷

These results are not necessarily static, however. It is possible that the effects of school choice could be improved through better outreach to low income communities, which appear to be most likely to benefit from charter schools.²⁸ Parents and students could also

Tully, Sarah. "New Rankings Are Out on Charter School Laws. How Do States Use Them?" *Education Week*, March 29, 2017. http://blogs.edweek.org/edweek/charterschoice/2017/03/indiana_keeps_top_ranking_for_state_charter_laws_under_updated_criteria.html.
Center for Research on Education Outcomes. "National Charter School Study: 2013." June 2013. p. 87. http://credo.stanford. edu/documents/NCSS%202013%20Final%20Draft.pdf; For a discussion of methodology, see: Egalite, Anna J. and Matthew Ackerman. "Rethinking Charter School Evaluations When the Gold Standard Is Off the Table." *Education Next*, November 9, 2015. http://education-next.org/rethinking-charter-school-evaluations-when-the-gold-standard-is-off-the-table/.

^{22.} Institute of Education Sciences. "Evaluation of the Impact of Charter School Strategies." June 2010. https://ies.ed.gov/ncee/projects/ evaluation/choice_charter.asp.

^{23.} NACSA and Charter School Growth Fund. "Replicating Quality." January 2014. http://www.qualitycharters.org/wp-content/uploads/2016/01/ReplicatingQuality Report.2014.01.pdf.

^{24.} Hoxby, Caroline. "School Choice and School Productivity: Could School Choice be a Tide that Lifts All Boats?" 2003. http://www. nber.org/chapters/c10091.pdf; Wolfram, Gary. "Make Public Education a Market Economy—Not a Socialist One." *Education Next,* January 5, 2018. https://www.edweek.org/ew/articles/2018/01/08/make-public-education-a-market-economy--not-a.html.

^{25.} A review of studies that suggest positive effects for school choice can be found in: Wolf, Patrick and Anna Egalite. "Pursuing Innovation: How Can Educational Choice Transform K–12 Education in the U.S.?" Friedman Foundation. April 2016. https://files.eric. ed.gov/fulltext/ED570184.pdf.

^{26.} Abdulkadiroğlu, Atila et al. "Do Parents Value School Effectiveness?" School Effectiveness & Inequality Initiative. October 2017. http://seii.mit.edu/research/study/do-parents-value-school-effectiveness/; Mathematica Policy Research. "Market Signals: Evidence on the Determinants and Consequences of School Choice from a Citywide Lottery." June 15, 2016. p. 4. https://www.mathematica-mpr.com/ our-publications-and-findings/publications/market-signals-evidence-on-the-determinants-and-consequences-of-school-choice-from-a-city-wide; Jabbar, Huriya. "How Do School Leaders Respond to Competition: Evidence from New Orleans." New Orleans Education Research Alliance. March 26, 2015. https://educationresearchalliancenola.org/files/publications/ERA1501-Policy-Brief-Competition-DD2.pdf; Harris, Douglas and Matthew Larsen, "What Schools Do Families Want (and Why)? Technical Report." New Orleans Education Research Alliance. January 15, 2016. p. 4. https://educationresearchalliancenola.org/publications/policy-brief-what-schools-do-families-want-and-why. 27. Mathematica Policy Research. "Market Signals: Evidence on the Determinants and Consequences of School Choice from a Citywide Lottery." June 15, 2016. p. 4. https://www.mathematica-mpr.com/our-publications-and-findings/publications/market-signals-evidence-on-the-determinants-and-consequences-of-school-choice-from a Citywide Lottery." June 15, 2016. p. 4. https://www.mathematica-mpr.com/our-publications-and-findings/publications/market-signals-evidence-on-the-determinants-and-consequences-of-school-choice-from-a-citywide; Abdulkadiroglu, Atila et al. "Do Parents Value School Effectiveness?" School Effectiveness & Inequality Initiative. October 2017. http://seii.mit.edu/research/study/do-parents-value-school-effectiveness/

^{28.} Walters, Christopher R. "The Demand for Effective Charter Schools." October 2014. p. 26. http://www.nber.org/papers/w20640. pdf; DeArmond, Michael et al. "Making School Choice Work." Center on Reinventing Public Education. July 2014. https://www.crpe.org/publications/making-school-choice-work.

be provided with better information about comparative educational outcomes at nearby charters and traditional public schools, including measures of academic growth.²⁹

• **Financial Resources:** A 2010 IES-sponsored study found a weak association between charter school financing (revenue per student) and student achievement.³⁰ The relationship disappeared after controlling for other characteristics of charter schools and their students, which suggested that other factors were more important. The broader literature on school finance indicates that additional resources can have positive effects on student achievement, but these effects are probably heavily dependent on how such resources are allocated.³¹

Research on Individual Charter School Practices

There has been much less research conducted on the effectiveness of individual charter school practices, and most of it is correlational. According to one review, practices that have been most consistently associated with positive academic outcomes include: (1) longer school days or years; (2) comprehensive behavioral policies with associated rewards and sanctions; and (3) school missions that are focused on boosting academic achievement.³² Practices that are associated with more modest, but positive, effects include intensive tutoring, frequent feedback and coaching for teachers, and policies promoting the use of data.³³



The chosen mix of school practices probably affects student outcomes. One study tested this possibility by examining the effects of adopting charter school practices in traditional public schools in Houston.³⁴ It found significant increases in mathematics achievement, but lesser effects on reading, an outcome that mirrors those normally found in No Excuses charter schools.

^{29.} Ibid.

^{30.} Institute of Education Sciences. "Evaluation of the Impact of Charter School Strategies." June 2010. p. 65-66. https://ies.ed.gov/ ncee/projects/evaluation/choice_charter.asp.

^{31.} Dynarski, Mark. "It's Not Nothing: The Role of Money in Improving Education." Brookings Institution. March 2, 2017. https://www. brookings.edu/research/its-not-nothing-the-role-of-money-in-improving-education/; Lafortune, Julien et al. "School Finance Reform and the Distribution of Student Achievement." July 2016. http://www.nber.org/papers/w22011; Jackson, C. Kirabo et al. "The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement, and Adult Outcomes." August 2014. http://www.nber.org/ papers/w20118.

^{32.} Mathematica Policy Research. "What's the Secret Ingredient? Searching for Policies and Practices that Make Charter Schools Successful." July 22, 2016. https://www.mathematica-mpr.com/our-publications-and-findings/publications/whats-the-secret-ingredient-searching-for-policies-and-practices-that-make-charter-schools.

^{33.} Farrell, Caitlin. "Designing School Systems to Encourage Data Use and Instructional Improvement." July 1, 2014. http://journals. sagepub.com/doi/abs/10.1177/0013161X14539806.

^{34.} Fryer, Roland. "Injecting Charter School Best Practices into Traditional Public Schools: Evidence from Field Experiments." April 1, 2014. http://scholar.harvard.edu/files/fryer/files/2014_injecting_charter_school_best_practices_into_traditional_public_schools.pdf; https:// www.povertyactionlab.org/evaluation/effect-charter-school-best-practices-public-schools-united-states.

Charter schools might improve their performance if more research was conducted on their practices. At least one leading proponent of charter schools, the Center on Reinventing Public Education, has advocated for greater research and use of such evidence. According to a paper by the organization:

Researchers and policymakers must work toward a better understanding of the conditions under which charter schools thrive or fall short in terms of improving learning outcomes for their students.

What types of state laws attract high-quality charter authorizers and place appropriate pressure on low-performing schools and authorizers? What are the structures and supports a city or district can put into place that ensure charter schools have the resources and latitude necessary to boost student achievement? How can district-run and charter schools work together to ensure all students are served well?

Studies that dive into particular local contexts, largely lacking in the literature today, would better inform local and national public policy debates and decisions, and contribute to a clearer understanding of what characterizes the types of charter schools that are truly making positive (or negative) differences for students.³⁵

35. Denice, Patrick. "Are Charter Schools Working? A Review of the Evidence." Center on Reinventing Public Education. August 2014. https://www.crpe.org/publications/are-charter-schools-working-review-evidence.

Use of Evidence by Charter Schools Varies

How much has evidence been used in the charter school sector? As with evidence-building efforts, the answer varies depending on whether the focus is on the charter school model as a whole or on individual evidence-based practices.

As a whole-school strategy, the charter model has experienced strong growth. As described earlier, federal initiatives like the Charter School Program (1994), No Child Left Behind (2002), the School Improvement Grants program under the Obama administration (2009), and Race to the Top (2009) have all played contributing roles. State-level policy changes have probably played the more central role, however, because states establish the authorizing and regulatory mechanisms that govern them.

Politics plays a driving role at both levels. Charter school politics has often been characterized as an interplay between advocates backed by wealthy philanthropists and opponents led by teachers' unions.³⁶ Throughout most of their history, these opposing forces have resulted in substantial growth in the charter sector, although structural and internal challenges may have contributed to a more recent slowing.³⁷

Despite the growth of charters as a whole-school strategy, however, the adoption of individual evidence-based practices within these schools has been more varied. One positive development is the widespread adoption of the No Excuses model in urban school districts. This appears to have helped spread practices associated with that strategy, including strict behavior codes, extended learning time, and tutoring.³⁸

It is unclear, however, if evidence has had much influence on charter practices beyond that. According to one 2011 analysis by the Center on Reinventing Public Education:

Contrary to expectations, charter schools rarely adopt novel instructional models. Few use alternative instructional approaches such as block schedules, team teaching, or multiage classrooms. Charter schools rely on smaller size, smaller classes, and more time to enable teachers and administrators to individualize and customize learning approaches for their students.³⁹

This adherence to tried-and-true practices has been criticized by some who argue that charters were originally intended to be laboratories of innovation. President Obama's Education Secretary, Arne Duncan, was among those who have called for more experimentation in the sector.

Stoddard, Christiana and Sean P. Corcoran. "Charter Politics." Education Next, Spring 2008. http://educationnext.org/charter-politics/; Prothero, Arianna. "From Walton to Zuckerberg: How Education Philanthropy Has Changed." *Education Week*, January 15, 2016. http://blogs.edweek.org/edweek/charterschoice/2016/01/from_walton_to_zuckerberg_how_education_philanthropy_has_changed.html.
Lake, Robin. "Why is Charter Growth Slowing." *Education Next*, January 2018. http://educationnext.org/why-is-charter-school-

growth-slowing-lessons-from-bay-area/. 38. Cheng, Albert et al. "No Excuses Charter Schools: A Meta-Analysis of the Experimental Evidence on Student Achievement." August

^{2015.} https://papers.ssm.com/sol3/papers.cfm?abstract_id=2652401.

^{39.} Gross, Bethany. "Inside Charter Schools." Center on Reinventing Public Education. February 2011. https://eric.ed.gov/?id=ED519943.

[C]harters are also supposed to be laboratories of innovation—they were to be the R&D wing of public education. And while charters have pioneered a number of critical innovations, too many charters still look like traditional public schools—instead of developing and adapting cutting-edge, science- and research-based innovations to accelerate learning.⁴⁰

A more complete understanding of innovation in the sector would require a comprehensive survey of charter practices. If such a survey were conducted, it would likely find pockets of innovation. However, if such innovation were both effective and widespread, its effects would be more apparent in national evaluations of charter school performance.

What could be causing this seeming failure of most charters to innovate? One reason may be insufficient incentives for change. As noted earlier, there is little evidence that school choice has generated significant market incentives for academic improvement. There is some evidence that regulatory oversight by charter authorizers has played a positive role. However, as noted by CREDO, these effects appear to be confined to the worst-performing schools in danger of being closed, with little apparent effect on schools operating above that level, at least on a national basis.

Another possible challenge is the risk associated with innovation. Most innovations fail, including those that take place in the private sector. Studies of new products or strategies by forprofit organizations like Google or Capital One routinely indicate failure rates of 90 percent or more.⁴¹ Such downside risks, particularly in a politically charged environment where low performance can lead to schools being closed, may inhibit innovation and create incentives to adhere to existing practices.

Another reason may be that charters lack the necessary resources. Charters may receive less funding on a per-pupil basis than traditional public schools.⁴² They also do not frequently seek out grants that would fund the development and testing of new evidence-based practices.⁴³ However, there is some evidence that large charter networks are improving at a faster rate than other schools.⁴⁴ This may be due to greater investments in data use and training, both of which may be associated with the greater economies of scale that come from being part of a large network.

Some of these resource constraints were partly addressed by the Every Student Succeeds Act (ESSA), but only in a limited fashion. ESSA substantially defers to states on school accountability, including charter schools.⁴⁵

 There is some disagreement on this issue. See: Wolf, Patrick et al. "Charter School Funding: Inequity in the City." May 9, 2017. http://www.uaedreform.org/charter-school-funding-inequity-in-the-city/; Baker, Bruce D. "NEPC Review: Charter School Funding: Inequity Expands." National Education Policy Center. May 20, 2014. http://nepc.colorado.edu/thinktank/review-charter-funding-inequity.
U.S. Government Accountability Office. "Charter Schools: Education Could Do More to Assist Charter Schools with Applying for Discretionary Grants." December 7, 2010. p. 22-23, 40-43. https://www.gao.gov/products/GAO-11-89.

44. Center for Research on Education Outcomes. "Charter Management Organizations." 2017. https://credo.stanford.edu/pdfs/ CMO%20FINAL.pdf; Mathematica Policy Research. "Charter-School Management Organizations: Diverse Strategies and Diverse Student Impacts." January 30, 2012. https://www.mathematica-mpr.com/our-publications-and-findings/publications/charterschool-managementorganizations-diverse-strategies-and-diverse-student-impacts.

45. ESSA, § 1001(c)(5).

^{40.} Duncan, Arne. "The Charter Mindset Shift: From Conflict to Co-Conspirators." July 2, 2013. https://www.ed.gov/news/speeches/ charter-mindset-shift-conflict-co-conspirators.

^{41.} Manzi, Jim. 2012. Uncontrolled: The Surprising Payoff of Trial-and-Error for Business, Politics, and Society. Basic Books. p. 143-167. Similar failure rates are common in health research.

However, ESSA allows states to aid charter schools through Title I school improvement funds.⁴⁶ States could choose to tie such aid to the use of evidence-based practices.⁴⁷ ESSA also reauthorized the federal Charter School Program, a competitive grant program for states to provide funding for new and existing charter schools. The reauthorized law includes provisions encouraging greater sharing of best practices, which could promote those that are evidence-based.⁴⁸

In sum, to the extent the charter model is itself evidence-based, there has been strong growth in its use. There is less reason to believe, however, that most charter schools are significantly improving on this model by creating, testing, and adopting new evidence-based practices.

46. Wolfe, Christy. "School Choice and Section 1003(b): It's in There." Thomas Fordham Institute. May 11, 2016. https://edexcellence.net/articles/school-choice-and-section-1003b-its-in-there; Education Commission of the States. "Charter School Accountability." May 2017. http://www.ecs.org/wp-content/uploads/Charter_School_Accountability_Under_ESSA-1.pdf.

47. Results for America. "ESSA Leverage Points: 50 State Report." January 12, 2018, p. 15-16. https://results4america.org/tools/essa-leverage-points-50-state-report-promising-practices-using-evidence-improve-student-outcomes/.

^{48.} U.S. Department of Education. "Charter School Program." https://www2.ed.gov/programs/charter/index.html.

Best Practices Case Study:

Charter Schools in Massachusetts

Massachusetts charter schools are among the best in the nation.⁴⁹ As is true elsewhere, the state's high performance appears to be associated with the use of the No Excuses charter model in urban settings and a willingness to shut down low-performing schools. However, the state has also benefitted from a partnership with two of its leading universities that has increased its understanding of the effectiveness of its charter schools and of certain innovative practices.

Such innovation was a central focus of the state's charter school laws. The first of these, the 1993 Massachusetts Education Reform Act, made the state one of the first in the nation to authorize charter schools.⁵⁰ The second, the 2010 Achievement Gap Act, doubled the number of charters authorized in school districts with the lowest-performing schools.⁵¹

In each case, the legislation justified the authorization of such schools based on their ability to serve as laboratories of innovation and school improvement. According to state law, the purposes of the state's charter schools are to:

- Stimulate the development of innovative programs within public education
- · Provide opportunities for innovative learning and assessments
- Provide parents and students with greater options in selecting schools within and outside their school districts
- Provide teachers with a vehicle for establishing schools with alternative and innovative methods of educational instruction, school structure, and school management
- Encourage performance-based educational programs
- Hold teachers and school administrators accountable for students' educational outcomes
- Provide models for replication in other public schools⁵²

If judged according to student outcomes, the state's charter schools appear to be achieving their objectives. Multiple studies have indicated that they are high-performing, including rigorous random assignment studies that have taken advantage of lottery systems for student admission to oversubscribed schools.⁵³

As is true elsewhere in the nation, however, this performance has been uneven. In general, the positive results have been concentrated among urban charters that disproportionally serve poor and minority student populations, particularly in Boston.⁵⁴ These positive effects appear

52. Mass Gen Laws ch 71, § 89. https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXII/Chapter71/Section89.

^{49.} Center for Research on Education Outcomes. "National Charter School Study: 2013." June 2013. p. 52-55, 84. http://credo.stan-ford.edu/documents/NCSS%202013%20Final%20Draft.pdf.

^{50.} Jonas, Michael. "Charter Schools' Early Days in Massachusetts." *Commonwealth Magazine*. March 8, 2016. https://commonwealthmagazine.org/education/charter-schools-early-days-in-massachusetts/; Chester, Mitchell. "Building on 20 Years of Massachusetts Education Reform." November 2014. http://www.doe.mass.edu/commissioner/BuildingOnReform.pdf.

^{51.} Vaznis, James. "Lawmakers Approve Education Bill." Boston Globe, January 15, 2010. http://archive.boston.com/news/ education/k_12/mcas/articles/2010/01/15/lawmakers_approve_education_bill/; Peterson, Paul. "Powerful Professors." *Education Next.* Fall 2009. http://educationnext.org/powerful-professors/.

^{53.} Angrist, Joshua et al. "Explaining Charter School Effectiveness." *American Economic Journal*. 2013. https://seii.mit.edu/wpcontent/uploads/2012/12/Explaining-Charter-School-Effectiveness.pdf; Abdulkadiroglu, Atila. "Accountability and Flexibility in Public Schools: Evidence from Boston's Charters and Pilots." *Quarterly Journal of Economics*. May 1, 2011. https://academic.oup.com/qje/ article/126/2/699/1871552; Some have argued that random assignment studies are not representative because over-subscribed schools may perform better than other schools. See: Cohodes, Sarah. "Charter Schools and the Achievement Gap." *The Future of Children*, Fall 2017; CREDO studies address this issue by using a different methodology. See: Center for Research on Education Outcomes. "Charter School Performance in Massachusetts." February 28, 2013. http://credo.stanford.edu/documents/MAReportFinal_000.pdf; https://futureofchildren.princeton.edu/sites/futureofchildren/files/resource-links/charter schools compiled.pdf.

^{54.} Center for Research on Education Outcomes. "Charter School Performance in Massachusetts." February 28, 2013. p. 15. http:// credo.stanford.edu/documents/MAReportFinal_000.pdf.

to be largely associated with the use of the No Excuses charter model.⁵⁵

The state's suburban charter schools, by contrast, produce high student achievement, but this appears to be because they are serving more advantaged student populations. Overall, their results are no better (and in some cases worse) than results in comparable suburban traditional public schools.⁵⁶ Combined, the results for both urban and non-urban charters in Massachusetts mirror those found for other charter schools nationwide.⁵⁷

Given that such results are similar to those found elsewhere, what sets Massachusetts apart? One reason may be strong regulatory oversight. A state cap on charter schools has helped make approval by the state Board of Elementary and Secondary Education a highly-competitive process, one that is reinforced by regulations that require new charters to be operated by providers with proven track records.⁵⁸ The state requires new applicants to demonstrate the use of evidence-based practices.⁵⁹ The state also closely monitors charter performance and has closed schools that are low-performing. As of late 2014, of the 102 charter schools that had been opened in Massachusetts, the state had closed 20.⁶⁰

Another possible contributing factor is a partnership between the state and two of its universities, MIT and Harvard, called the Massachusetts Charter School Research Partnership.⁶¹ This partnership has produced numerous studies of the state's charter schools, principally by researchers at Harvard University's Center for Education Policy Research (CEPR) and MIT's School Effectiveness and Inequality Initiative (SEII).

These studies have provided insights on the overall effectiveness of charter schools, but they have also examined individual school practices. One example can be found at the MATCH Public Charter High School, which participated in a study of its extended-day strategies.⁶² Another is a study of charter practices affecting English language learners and special needs students, which suggested that the No Excuses model appeared to be successful with these students, particularly through one-on-one tutoring.⁶³

^{55.} Angrist, Joshua et al. "Explaining Charter School Effectiveness." American Economic Journal. 2013. p. 23. https://seii.mit.edu/wp-content/uploads/2012/12/Explaining-Charter-School-Effectiveness.pdf.

^{56.} Ibid.

^{57.} Valent, Jon. "Probing Charter Schools' Differential Success in Urban and Nonurban Settings." Brookings Institution. March 4, 2016. https://www.brookings.edu/blog/brown-center-chalkboard/2016/03/04/probing-charter-schools-differential-success-in-urban-and-nonurban-settings/; Dynarski, Susan. "Urban Charter Schools Often Succeed. Suburban Ones Often Don't." *The New York Times*. November 20, 2015. https://www.nytimes.com/2015/11/22/upshot/a-suburban-urban-divide-in-charter-school-success-rates.html; J-PAL. "What Can We Learn from Charter School Lotteries in the United States." May 2017. https://www.povertyactionlab.org/sites/default/files/publications/what-can-we-learn-from-charter-school-lotteries.pdf.

^{58.} Massachusetts Department of Elementary & Secondary Education. "Massachusetts Charter Schools." http://www.doe.mass.edu/ charter/; Massachusetts Department of Elementary & Secondary Education. "Questions and Answers about Charter Schools." May 2017. http://www.doe.mass.edu/charter/new/2017-2018QandA.docx.

^{59.} According to state application guidelines: "the proposed educational program should address the diverse needs of the student population and should be founded on an understanding of effective, evidence-based educational practices and high standards for student learning." See: Massachusetts Department of Elementary & Secondary Education. "Commonwealth and Horace Mann Charter School Application for New Operators 2017-2018." http://www.doe.mass.edu/charter/app/NewOperators.docx.

^{60.} Chastity Prat Dawsey, "States of Education: Massachusetts Charter Schools are Few But Mighty." October 8, 2014. http://www. mlive.com/education/index.ssf/2014/10/smartest_kids_massachusetts_ch.html.

Carrie Conaway. "The Massachusetts Charter School Research Partnership." in Owen, Jenni W. and Anita M. Larson. 2017. Researcher-Policymaker Partnerships: Strategies for Launching and Sustaining Successful Collaborations, Routledge. p. 18-29.
Kraft, Matthew. "How to Make Additional Time Matter: Integrating Individualized Tutorials into an Extended Day." Education Finance and Policy, 2015. https://scholar.harvard.edu/mkraft/publications/how-make-additional-time-matter-estimating-causal-effectextending-school-day-in.

^{63.} Setren, Elizabeth. "Special Education and English Language Learner Students in Boston Charter Schools: Impact and Classification." October 2016. http://economics.mit.edu/files/12050.

One study examined the effects of one-on-one coaching of teachers.⁶⁴ Another study examined the impact of increased teacher-family communication through regular phone calls and text messaging.⁶⁵

How could the state build further on these efforts? Some possible answers could include increased federal and state support for more research on charter school practices, greater technical assistance to help charters adopt practices that are evidence-based, and greater use of competitive grants to incentivize the adoption of those practices. Another option might be to further promote the sharing of evidence-based practices among schools, both by the state and by the state association of charter schools.⁶⁶

^{64.} Killion, Joellen. "Changes in Coaching Study Design Shed Light on How Features Impact Teacher Practice." *Learning Forward*, April 2016. https://eic.ed.gov/?id=EJ1100437; https://learningforward.org/docs/default-source/jsd-april-2016/changes-in-coaching-study-design-april16.pdf.

^{65.} Kraft, Matthew and Shaun Dougherty. "The Effect of Teacher-Family Communication on Student Engagement: Evidence from a Randomized Field Experiment." October 2012. https://scholar.harvard.edu/mkraft/publications/effect-teacher-family-communication-student-engagement-evidence-randomized-field.

^{66.} Massachusetts Department of Elementary & Secondary Education, "Charter Schools: A Guide to the Dissemination of Best Practices." http://www.doe.mass.edu/charter/bestpractices/; Massachusetts Charter Public School Association. "Communities of Practice." https://masscharterschools.org/charter-school-professionals/communities-practice-cops.

RECOMMENDATIONS

While charter schools do not substantially outperform traditional public schools overall, some charters do perform better particularly urban charters that rely on the No Excuses model. Certain high-performing charter networks, like KIPP, also substantially outpace the rest of the sector.

These islands of excellence demonstrate the potential of the charter school model, but such high performance is not yet widespread in the sector. Moreover, even the best charter schools could benefit from further improvement.

Increasing the number of high performance charters will require a more robust evidence base on best practices, and greater incentives for existing charter schools to adopt the practices that are proven to be effective. The following concrete steps would support these objectives:

• Federal and State Grants Should Be Targeted to Supporting More Research on Individual Practices in Charter Schools: A greater share of federal and state grants should be devoted to charter schools that wish to test or validate innovative practices through rigorous evaluations. In 2013, the U.S. Department of Education adopted new rules for its competitive grants that encouraged greater use of such evaluations.⁶⁷ In 2017, the Trump administration continued this process by making school choice a priority for its education-related competitive grants.⁶⁸ Combined, these policies could spur greater research on charter school practices.

Massachusetts provides an example of an effective research partnership between a state and its leading universities. Other states could promote such partnerships and further incentivize them by incorporating evaluation requirements in their grants to charter schools. This research could include a focus on topics of growing importance to the sector, such as effectively serving children with special needs.⁶⁹

• The U.S. Department of Education Should Focus More on Identifying Evidence-based Charter School Practices: Practitioners frequently face difficulties when attempting to identify practices that are backed by the highest levels of evidence. Reviewing such studies is a function normally performed by evidence clearinghouses. The What Works Clearinghouse at the U.S. Department of Education could devote more attention to reviewing studies on charter practices. Where such research is not available, it could highlight relevant practices that have been validated outside of the charter school environment, a

^{67.} Federal Register. "Department of Education: Direct Grant Programs and Definitions That Apply to Department Regulations." August 12, 2013. p. 49342-49347. https://www.federalregister.gov/documents/2017/07/31/2017-15989/definitions-and-selection-criteria-that-apply-to-direct-grant-programs.

^{68.} Klein, Alyson. "DeVos Wants to Steer Grant Money to School Choice, STEM, and More." *Education Week*. October 11, 2017. http://blogs.edweek.org/edweek/campaign-k-12/2017/10/betsy_devos_wants_to_steer_mon.html; *Federal Register*. "Education Department: Proposed Supplemental Priorities and Definitions for Discretionary Grant Programs." October 12, 2017. https://www.fed-eralregister.gov/documents/2017/10/12/2017-22127/secretarys-proposed-supplemental-priorities-and-definitions-for-disretionary-grant-programs.

^{69.} Prothero, Arianna. "Bill Gates Plans to Invest in Charter Schools' Big Weak Spot: Special Education." *Education Week*, October 20, 2017. http://blogs.edweek.org/edweek/charterschoice/2017/10/bill_gates_plans_to_invest_in_charter_schools_big_weak_spot_special education.html.

strategy that may prove fruitful because effective practices in charters and traditional schools appear to be very similar.⁷⁰

- States Should Support Greater Sharing of Knowledge on Evidence-based Practices: Under the federal Charter School Program, states are already encouraged to oversee the sharing of best practices among charter schools and between charters and traditional public schools.⁷¹ States could use this process to encourage the identification and adoption of practices that are evidence-based.
- States and Other Appropriate Authorities Should Strengthen Incentives for Improved Charter School Performance: To date, the research on school choice as a performance driver for charter schools is mixed at best. States and other appropriate authorities should consider improvements to existing market incentives. One option is to provide better information to parents and students about student outcomes, including measures of academic growth and comparisons to nearby schools. These strategies should be rigorously evaluated to determine their effectiveness.

States and other payors⁷² could also experiment with payment bonuses for charter schools that are tied to:

- increased student performance
- serving higher-need or higher-cost students, such as English language learners, students with behavior problems, or students with special needs.⁷³ Such measures should also be rigorously evaluated before they are adopted widely. To accurately assess improvement in student outcomes and avoid the potential for cream-skimming the easiest-to-serve students, such designs may need to rely on value-add measures.⁷⁴
- State Charter Authorizers Should Incorporate Evidence More Thoroughly in their Reviews: State-approved charter authorizers are the primary oversight mechanism for charter schools. Charter authorizers vary in their practices, but the best track charter school student outcomes, academic growth, and emphasize the replication of quality schools with proven track records.⁷⁵

Charter authorizers could go further by encouraging more charters to test or adopt new evidence-based practices as a condition for charter approval or renewal. Consistent with

Maas, Tricia and Robin Lake. "Effective Charter and Traditional School Characteristics: Aligning Findings for Informed Policy Making." *Journal of School Choice*. May 2015. http://www.tandfonline.com/doi/abs/10.1080/15582159.2015.1028311.
Office of Innovation and Improvement, Department of Education. "Application for New Awards; Expanding Opportunity Through Quality Charter Schools Program (CSP)—Grants to State Entities." *Federal Register*, March 27, 2017. https://www.gpo.gov/fdsys/ pkg/FR-2017-03-27/pdf/2017-06017.pdf; Maas, Tricia and Robin Lake. "Passing Notes: Learning from Efforts to Share Instructional Practices Across District-Charter Lines." February 2018. https://www.crpe.org/publications/passing-notes-share-instructional-practicesacross-district-charter-lines.

^{72.} Charter school funding comes from a variety of federal, state, local, and private sources. See: Wolf, Patrick et al. "Charter School Funding: Inequity in the City." May 9, 2017. http://www.uaedreform.org/charter-school-funding-inequity-in-the-city/.

^{73.} One potential example is the Delaware Charter School Performance Fund. See: https://www.doe.k12.de.us/Page/414; See also: NACSA and Charter School Growth Fund. "Replicating Quality." January 2014. p. 12-13. http://www.qualitycharters.org/wp-content/uploads/2016/01/ReplicatingQuality_Report.2014.01.pdf.

^{74.} Jabbar, Huriya. "How Do School Leaders Respond to Competition: Evidence from New Orleans." New Orleans Education Research Alliance. March 26, 2015. p. 4. https://educationresearchalliancenola.org/files/publications/ERA1501-Policy-Brief-Competition-DD2.pdf; Betts, Julian R. and Y. Emily Tang. "Value-added and Experimental Studies of the Effect of Charter Schools on Student Achievement." Center on Reinventing Public Education. December 2008. http://www.econ.ucsd.edu/~jbetts/Pub/A58%20pub_ncsrp_bettstang_dec08. pdf; Deming, David. "Using School Choice Lotteries to Test Measures of School Effectiveness." *American Economic Review*, 104, May 2014. http://scholar.harvard.edu/files/ddeming/files/aer.104.5.406.pdf.

^{75.} National Association of Charter School Authorizers. "Authorizer Practices: What's Working and What's Not." March 2017. http:// www.qualitycharters.org/wp-content/uploads/2017/03/Authorizer-Practices-Whats-Working-and-Whats-Not-March-2017.pdf; National Association of Charter School Authorizers and Charter School Growth Fund. "Replicating Quality." January 2014. http://www.qualitycharters.org/wp-content/uploads/2016/01/ReplicatingQuality_Report.2014.01.pdf

the flexibility accorded to such schools, charters should be free to choose which strategies they will test or adopt, consistent with authorizer-determined evidence standards.

Similarly, charter authorizers should avoid adopting standards that may discourage such innovation. Charter authorizers should also recognize that innovations frequently experience high failure rates and avoid punishing charter schools that are testing new ideas in good faith. Establishing and communicating clear expectations, timelines, and action steps will help stakeholders manage the inevitable ups and downs that go along with any innovation.

 States Should Incorporate Evidence Requirements in their Grants to Charter Schools: Partly because of ESSA, more federal education grants may include requirements that grant-funded programs be evidence-based.⁷⁶ The competitive nature of such grants provides an additional incentive for applicants to reach for higher levels of evidence. States could incorporate similar requirements in their grants to charter schools.

Charter schools retain their potential to become innovation laboratories, not just for themselves, but for K-12 education as a whole. However, greater attention and resources must be devoted to innovating, testing, and validating evidence-based practices for the rhetoric of innovation to become a reality.

^{76.} Department of Education. "Definitions and Selection Criteria That Apply to Direct Grant Programs." *Federal Register*, July 31, 2017. https://federalregister.gov/d/2017-15989.

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This report was developed with the generous financial support of the Laura and John Arnold Foundation. The opinions expressed in this report are the author's and do not necessarily represent the view of the foundation.

LABORATORIES OF INNOVATION: BUILDING AND USING EVIDENCE IN CHARTER SCHOOLS

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