

Improving Student Opportunities and Outcomes in Hartford Public Schools

Christine Campbell and Betheny Gross
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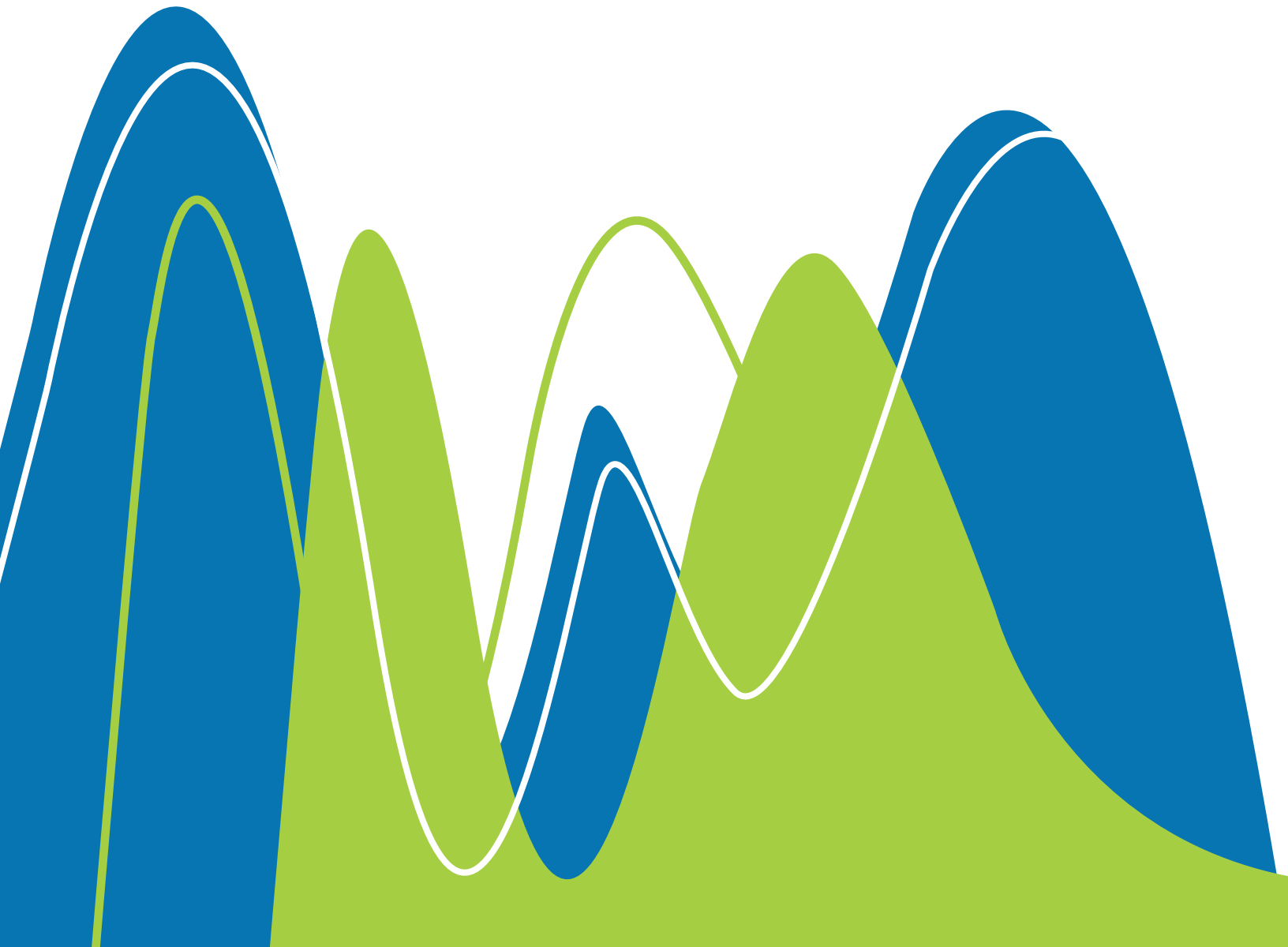


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About This Report

Author's Note

This report is a descriptive analysis of publicly available data. It is useful in that it charts the recent progress Hartford Public Schools has made in achieving important outcomes. The district should be credited for seeking and providing to its community an account that shows not just their successes but also the work they have yet to accomplish.

This report, however, is limited in that it cannot directly attribute any of the changes to any particular reform initiative. A more-detailed longitudinal analysis of progress made before and after the district initiated its reforms, and controlling for important factors, would be needed to more precisely and confidently attribute the changes to specific initiatives. Moreover, this report has not yet undergone a thorough peer review. We welcome public critique and conversation about the data and our interpretation of it. This report should be a starting point for a citywide conversation about the district, its goals, and the work going forward, and not the last word on the district's efforts.

Our thanks to Dr. Christina M. Kishimoto, Dr. George Michna, Kelvin Roldán, and Hartford Public Schools for their collaboration in writing this report.

About the Authors

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About the Center on Reinventing Public Education

Through research and policy analysis, CRPE seeks ways to make public education more effective, especially for America's disadvantaged students. We help redesign governance, oversight, and dynamic education delivery systems to make it possible for great educators and programs to do their best work with students and to create a wide range of high-quality public school options for families.

Our work emphasizes evidence over posture and confronts hard truths. We search outside the traditional boundaries of public education to find pragmatic, equitable, and promising approaches to address the complex challenges facing public education. Our goal is to create new possibilities for the parents, educators, and public officials who strive to improve America's schools.

CRPE is a self-sustaining organization affiliated with the University of Washington. Our work is funded through private philanthropic dollars, federal grants, and contracts.

Summary of Findings:

What have Hartford Public Schools' reforms meant for students?

For seven years, Hartford Public Schools has pursued a strategy of portfolio management to raise student achievement—closing and redesigning chronically low-performing schools, opening new schools, and using data to guide these decisions. The portfolio strategy is one of continuous improvement, expecting district leaders and educators to constantly learn from the work and seek better outcomes through innovation.

With continuous improvement in mind, Hartford Public Schools commissioned the Center on Reinventing Public Education to conduct an analysis of the past seven years of reforms, seeking to answer the following question:

Have opportunities to attend quality schools and student outcomes improved as the district implemented the portfolio reform?

A review of data from both Hartford Public Schools and the Connecticut State Department of Education shows that Hartford students now have more quality school options, have increased test scores, and are graduating at higher rates. Students are performing better on state assessments than they were 10 years ago and even 5 years ago. Since 2006 the performance gap between Hartford students and students statewide has declined by 10 points (one-third).

The findings show that:

- Hartford has increased the number of quality schools in the district.
- Hartford has significantly increased family choice.
- Hartford is replacing chronically low-performing schools with “redesign” options.
- Most of the redesigned schools show improved reading scores, though they struggle in math.

The findings also show that, for student outcomes:

- Hartford has made significant improvement in reading performance since 2006.
- Hartford has made notable gains in math since 2007, but those leveled off in the last two years.
- Special education students are outpacing statewide peers in math, but just keeping pace in reading.
- Middle and high school English language learners (ELL) closed the achievement gap with ELL peers at the state level, but still lag far behind their native English-speaking peers.
- Hartford's graduation rates have increased each year, but one in three students fails to graduate in four years.
- Hartford has boosted SAT-taking, a gateway to college attendance, by providing the test for free during the school day.

Hartford has made significant gains and educators, students, and their families have much to be proud of. However, the district faces new challenges in continuing to increase student achievement, especially in math, and stepping up graduation and college-going rates. Hartford has set the portfolio strategy in motion—it must now use it to think broadly and seriously about how to tackle these challenges.

Recommendations for next steps:

- Take advantage of the redesign process to seek out innovative, high-performing designs for replacement schools.
- Continue to add quality seats with a focus on equity and access for special populations.
- Focus on math, identify weaknesses, and seek out proven providers, including online and charter school options.
- Seek out creative, personalized solutions for ELL challenges by trying and evaluating many approaches.
- Press for graduation and college-going by focusing on math, promoting college-going cultures in schools and screening for this culture in any new school providers, and increasing SAT preparation and test-taking.

Introduction

Cities throughout America struggle to educate their children. Mayors and community leaders concerned about cities' economic survival and quality of life worry that too many children leave public schools unprepared for work and citizenship. They also worry about losing families because they migrate to the suburbs or choose not to come to the city in the first place. Cities have many advantages, but if they cannot improve their schools, they have reason to fear both for children's future in a dynamic, competitive world economy, and for their cities' future as homes of successful businesses and as good places to live.

Over the last decade, New York, Chicago, New Orleans, Denver, Hartford, and more than 30 other cities have adopted a new strategy to transform K-12 public education. The portfolio strategy transforms the role of a school district from a centralized provider of similar schools to a sponsor of a diverse set of schools staffed and operated by the best people and organizations available. The strategy encourages new ideas and new uses of technology. Its only goal is to ensure high and uniform levels of learning for all students, so city leaders can give a positive answer to the question, "Is this the very best we can do for our children?"

The purpose of this report

Hartford Public Schools was an early adopter of the portfolio strategy in 2006 and is a leader among districts implementing the reform. Yet both the district and the community are in need of hard evidence: as schools have been closed, redesigned and opened, budgets used differently, and central office staffs reduced and restructured, the question of proof arises: are children in Hartford better off?

Hartford Public Schools commissioned the Center on Reinventing Public Education (CRPE) to provide background and framing on the portfolio strategy, to identify key questions, to assist with data analysis, and to suggest next steps. The overall purpose of this report is to chart the progress of students since the implementation of the portfolio strategy in Hartford Public Schools, assessing the district against where it started, where it is now, and where it wants to be.

The analysis team used publicly available data from the Connecticut Department of Education as well as data provided by Hartford Public Schools.¹ In most cases we provide descriptive summaries of these data. At times, however, we combined various data sources to provide a new look at the information.² Our analysis reaches back to 2001 but primarily focuses on the changes since 2006–07, the point at which the portfolio strategy was put into action.

1. We retrieved state assessment data from <http://www.ctreports.com>. We retrieved time-series data on math course-taking and special education identification from Connecticut Education Data and Research (CEDaR) at http://sdeportal.ct.gov/Cedar/WEB/ct_report/CedarHome.aspx. Assessment data was retrieved from district records, including graduation data for 2010–12 as well as detailed enrollment and school status reports for the years 2002–12. SAT data were drawn from two sources: data prior to 2009–10 came from the above state website and recent data came from District Integrated Summary reports generated by the College Board.

2. For example, we combined the state assessment data with the enrollment data to assess how many Hartford students are enrolled in schools performing at or above the state average—schools we refer to in this report as "quality schools."

What Is The Portfolio Strategy?

The portfolio strategy is a model in which districts manage a portfolio of schools, including some run by charter authorizers and other independent entities. The strategy is based on 7 key components that create diverse options for families in all neighborhoods, including: opening new high-performing, autonomous schools; giving all schools control of budgeting and hiring; and holding schools accountable to common performance standards.³ It is a continuous improvement strategy, with district leaders and educators constantly learning from the work and seeking better outcomes through innovation.

More than 30 districts across the country—educating close to 4 million students—have adopted this problem-solving framework as a way to improve the school options and educational outcomes for the children in their city.⁴

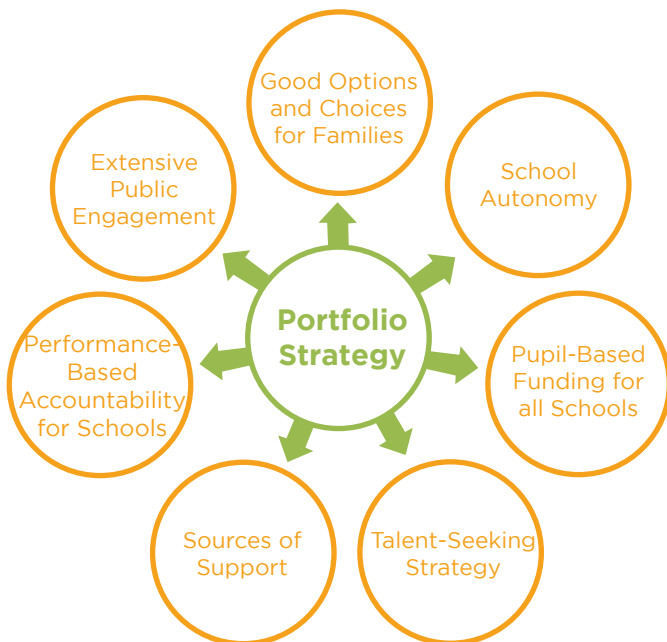
CRPE is credited as the originator of the strategy and the leading expert on the topic. CRPE has been studying district reform efforts since 1993 and supporting districts with portfolio implementation since 2008.

A different approach: What makes the Portfolio Strategy unique?

TRADITIONAL SCHOOL DISTRICTS	PORTFOLIO SCHOOL DISTRICTS
<ul style="list-style-type: none"> • Schools as permanent investments • “One best system” of schooling • Government as sole provider 	<ul style="list-style-type: none"> • Schools as contingent on performance • Differentiated system of schools • Diverse groups provide schools

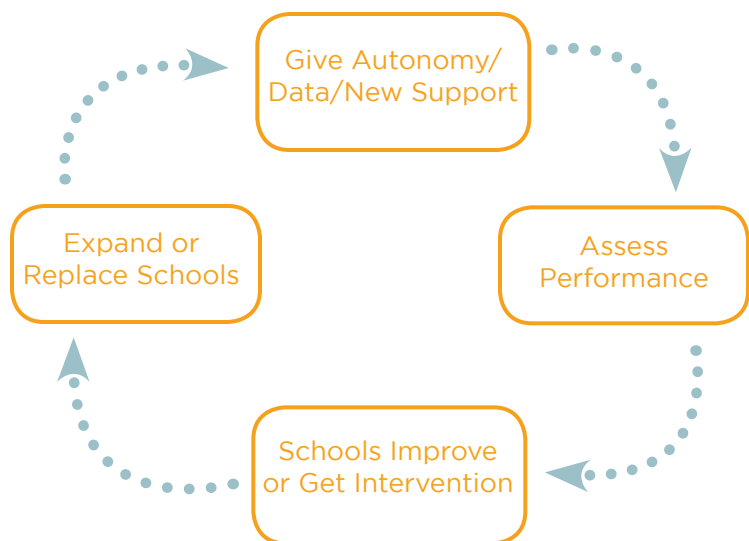
School districts adopting the portfolio strategy oversee and hold accountable a supply of diverse schools that are managed in many ways—including by charter operators, nonprofit organizations, and the district itself. Leading portfolio districts are committed to supporting existing schools that are succeeding with the children they serve, closing unproductive schools, and creating new schools similar to those that have already proven effective. Districts encourage families to exercise informed school choice, and explicitly foster an environment to attract talent and support innovation and school improvement.

Portfolio districts seek continuous improvement by providing schools with autonomy, data, and new sources of support; assessing the performance of all schools; closing the lowest-performing schools; and creating new opportunities for students in the least productive schools. This process continues indefinitely, so that the district is progressively less tolerant of unproductive schools. Schools—new and old—that were once considered “good enough” will ultimately experience pressure for continuous improvement.



3. See “7 Components of a Portfolio Strategy,” <http://www.crpe.org/portfolio/components>.

4. For a list of cities using the portfolio strategy, see <http://www.crpe.org/portfolio/districts>.



the state level, effectively closing the achievement gap. He started by shrinking the central office and devolving more positions to the school level. He developed an accountability matrix to rank school performance and criteria for closure and redesign, and awarded autonomy for high-performing schools. The district gave families increasing school choice opportunities. A move to student-based budgeting, where budgets are allocated based on enrollment and schools can decide how to staff and spend on student learning needs, gave schools increasing autonomy and flexibility. School governance councils made up of families, staff, and communities formed to help build the school budget and make decisions with the principal. In 2008, Achievement First opened, the first district-affiliated charter school. Under Dr. Adamowski’s leadership from 2006–11, the district redesigned or converted 16 schools to magnet status and permanently closed six low-performing schools, and student performance began a gradual but sustained increase.

In 2011, at the end of Dr. Adamowski’s planned five-year tenure, then-Assistant Superintendent Dr. Christina Kishimoto was selected as his successor. She has continued the reforms begun under Dr. Adamowski and moved them into the next phase, with a continued emphasis on closing the achievement gap and ensuring college and career readiness for Hartford students. This second phase of reform, described as Strategic Alignment, is focused on deepening the reform efforts, personalizing learning for students through new technology, emphasizing college and career readiness, supporting teachers to be successful under new evaluation systems, and continuing to align the central office to serve and support autonomous schools.

The Portfolio Strategy in Hartford

The portfolio strategy in Hartford began in 2006 when the hybrid Hartford Board of Education hired Dr. Steven Adamowski as its third superintendent in three years.⁵ One of the poorest cities in one of the richest states, Hartford ranked among the lowest-performing districts in the nation while Connecticut ranked among the highest-performing states. In 2006, Hartford was the lowest-performing district in Connecticut in every area measured by state assessments, lagging the state by 35 points in reading (with 39 percent proficient) and by 35 points in math (with 47 percent proficient.)

Dr. Adamowski, with district, city, and community leadership, defined a new vision for raising student achievement: creating a system, or portfolio, of high-performing schools of choice where students achieve at

Table 1: Who Attends Hartford and Connecticut Public Schools?

2012-13 ENROLLMENT BY SUB-GROUP	CONNECTICUT	HARTFORD
	2010-2011	2012-2013
Total Number of Schools	1,184	51
Total Number of Students	560,546	21,356
% Students–Black	13.2%	32.0%
% Students–Hispanic	18.6%	49.7%
% Students–White	62.0%	11.1%
% Students–Two or more races	1.4%	3.4%
Free and Reduced-Price Lunch*	34.0%	85.4%
LEP/ELL Students	5.4%	16.6%
Individualized Education Program	12.2%	14.5%

*Indicator of economic disadvantage

SOURCE: Most recently available CT data from U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Public Elementary/Secondary School Universe Survey”, 2010–11, Version 2a; and “Local Education Agency Universe Survey”, 2010–11, Version 2a; and “State Nonfiscal Survey of Public Elementary/Secondary Education”, 2010–11, Version 1a. Hartford data for 2012–13 provided by Hartford Public Schools.

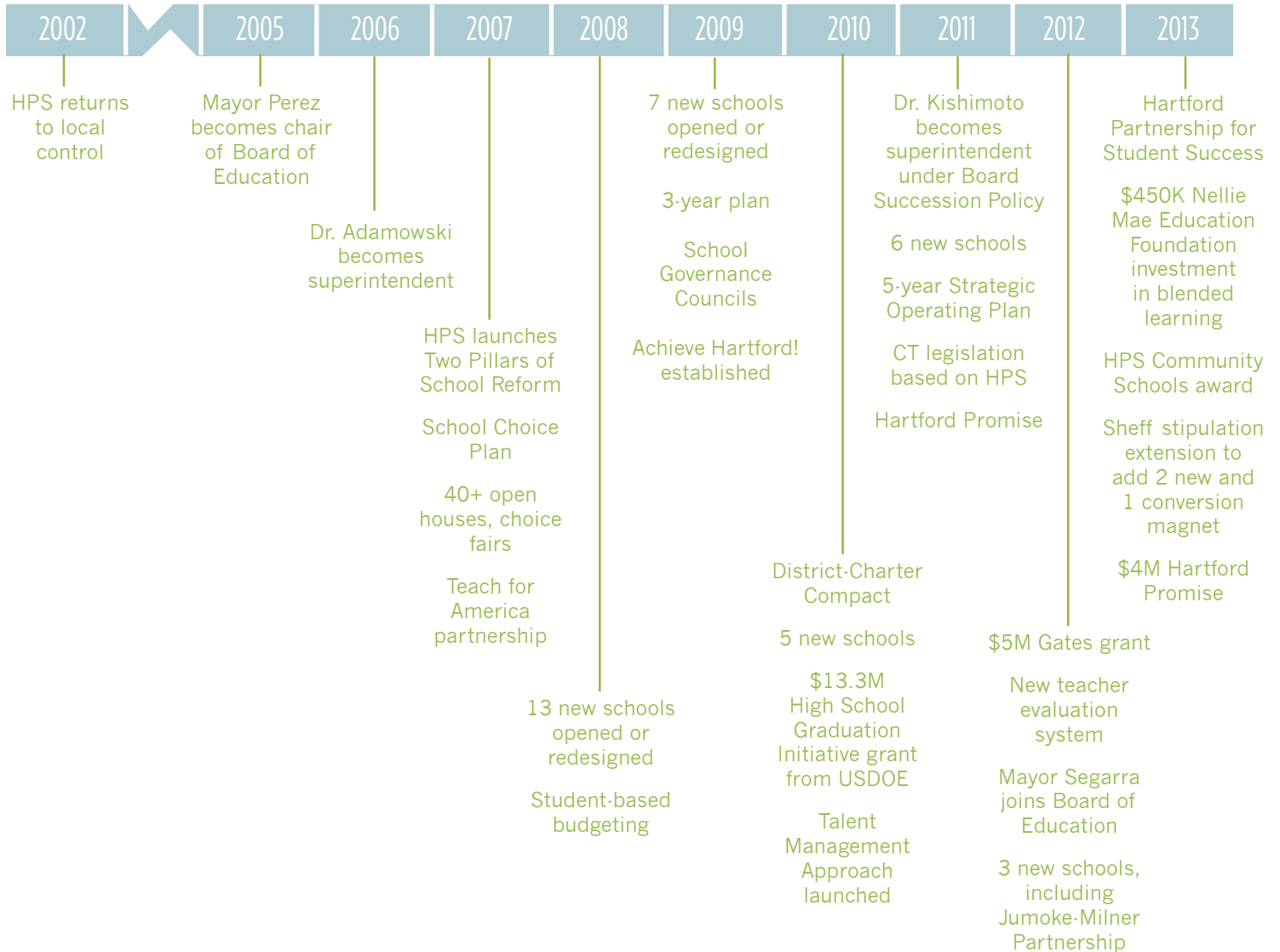
5. The district moved out of state control in 2002 into a “strong mayor” governance system that allows the mayor to appoint five of the nine school board members to a hybrid board.

According to the CRPE’s progress rankings, among more than 30 other portfolio districts, Hartford ranks fourth in terms of implementation—behind only some of the boldest districts in the nation: the Tennessee Achievement School District, the New Orleans Recovery School District, and the New York City Department of Education.⁶ Hartford Public Schools has drawn the attention of local and national funders, raising millions in support of its competition in 2012.

Hartford has faced its share of challenge and controversy over the past seven years of sustained

reform. Critics initially resisted school redesigns as well as school site moves and changes to magnet status. Downsizing and budget cuts resulted in job loss for many in the central office. By becoming more transparent in finances and decision-making, Hartford Public Schools has also opened itself to greater public scrutiny. These challenges are not unique to Hartford and illustrate the natural conflicts that arise when a district takes bold steps to address lagging achievement. They also highlight the need for districts to evaluate whether changes are leading to improvements.⁷

Figure 1: Timeline of major portfolio milestones in Hartford Public Schools



6. The Portfolio Implementation Snapshots are created by CRPE and frame district reform efforts within the portfolio model using data and interviews with district leaders. They are updated every six months. To view Hartford or other city snapshots, see: <http://www.crpe.org/portfolio/dashboard>

7. See Paul T. Hill, Christine Campbell, and Betheny Gross, *Strife and Progress: Portfolio Strategies for Managing Urban Schools* (Washington, DC: Brookings Institution Press, 2012).

Opportunities & Outcomes of the Portfolio Strategy for Hartford Students

THE OVERARCHING QUESTION

Have opportunities to attend quality schools and student outcomes improved as the district implemented the portfolio reform?

To be able to answer this question positively, Hartford Public Schools should see:

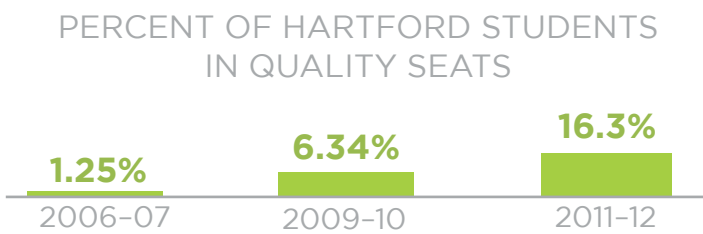
OPPORTUNITIES	OUTCOMES
<ul style="list-style-type: none">• Increased numbers of quality schools citywide• Increased school choice options for families• Improved achievement at schools that were redesigned	<ul style="list-style-type: none">• Increased graduation rates and increased student achievement in tested grades and subjects• Lower achievement gaps between key demographic groups of students compared to the state

Findings

Opportunities for students to access better schools

Hartford offers families more school choices and more quality schools, but efforts to improve schools with redesigns have yielded mixed results.

Figure 2. Hartford has increased the number of students enrolled in quality schools in the district



In 2006–07, only one Hartford school (with 269 students enrolled, 1.25 percent of total enrollment) exceeded the state average in reading proficiency. Three years later, three schools met this quality designation (with 1,302 students enrolled, 6.34 percent of total enrollment). Two years after that, in 2011–12, seven schools beat the state average (serving 3,381 students, 16.3 percent of total enrollment).

Looking across special populations, African American students are proportionately represented in these quality schools, at about 15.6 percent enrolled, and Hispanic students are somewhat less at 11.3 percent. However, other students are under-represented: In 2011–12, 9.8 percent of special education students, 7.6 percent of low-income students, and 4.9 percent of ELL students were enrolled in these quality schools.

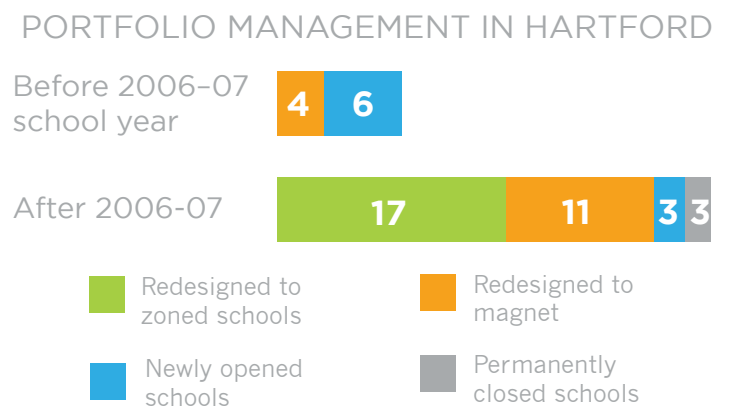
Creating good choices for families is the foundation of Hartford’s reform initiative. In 2006–07, only 13 percent of the seats in Hartford public schools were open choice seats for Hartford students. Today, every Hartford student can select into and receive

Table 2. Hartford has dramatically increased family choice

	2006-07	2008-09	2012-13
Choice seats available to Hartford students	12.9%	23%	100%

transportation to any school within their zone—a geographic subsection of the district. In addition to zone choices, 20 magnet schools are available for citywide choice.

Figure 3. Hartford is replacing chronically low-performing schools with redesign options



A key lever in increasing quality seats and providing more choices is the district’s active management of schools based on their performance. Before 2006–07, the district redesigned 4 schools and opened 6 new schools. Since the 2006–07 school year and the adoption of the portfolio strategy, the district has taken a much more active approach to performance management, with a record number of 34 school changes: redesigning 17 schools, converting 11 schools to magnet status, opening 3 new schools, and permanently closing 3 failing schools and reassigning the students to other schools in the district.

Notably, the district also acted strategically on its positive performance data, encouraging the growth of its higher performing schools by enrolling more students in those schools. The quality schools referenced above (those with average percent proficient across reading and math exceeding the state average) are among the fastest growing schools in the district, increasing their enrollment by just over 10 percent in the 2012–13 school year.

Most redesigns pay off in improved reading outcomes

Turning around failing schools is one of the hardest endeavors to attempt in education, and the results in Hartford bear out this challenge. In Hartford, school turnarounds are called redesigns, and they involve an array of interventions including replacing staff and bringing in new programming. All of the schools undergoing redesign ranked among the lowest-performing schools in the state. These schools need to dramatically improve in order to provide students with acceptable education opportunities. Though the

redesigned schools showed broad improvement in reading, math scores remained mainly flat or declined.

Seven of the ten redesigned elementary and middle schools showed improvements in reading. Only three showed similar improvements in math, and four declined. There does not seem to be a connection between how long ago a school was redesigned and its performance.

In high schools, the results were equally mixed, with three of four showing improvement in reading and only one showing improvement in math, with three declining.

Table 3. Redesigned elementary and middle schools show improvements in reading, but stall or decline in math

ELEMENTARY AND MIDDLE SCHOOLS	REDESIGN YEAR	CHANGE IN % PROFICIENT SINCE REDESIGN	
		MATH	READING
+ improvement, – decline, ~ no change			
America’s Choice at Sand	2009–10	+	+
Burns Latino Studies Academy	2008–09	+	+
Expeditionary Learning Academy	2011–12	+	~
Dr. James H Naylor/CCSU Leadership Academy	2010–11	~	+
Sarah J Rawson Elementary School	2010–11	~	+
Milner Core Knowledge School	2008–09	~	+
McDonough Expeditionary Learning School	2011–12	–	+
Rawsom Middle Grades Academy	2010–11	–	+
MD Fox	2009–10	–	–
Asian Studies at Dwight/Bellizzi	2010–11	–	–

Table 4. Redesigned high schools show gains in reading, but most decline in math

HIGH SCHOOLS	REDESIGN YEAR	CHANGE IN % PROFICIENT SINCE REDESIGN	
		MATH	READING
+ improvement, – decline, ~ no change			
HPHS Academy of Engineering & Green Technologies	2008–09	+	+
HPHS Law & Government Academy	2008–09	–	+
HPHS Nursing Academy	2008–09	–	+
Bulkeley Lower School	2008–09	–	~

Note: Redesigns occurring in 2012–13 are not included in this table.

Outcomes: What have Hartford's reforms meant for students?

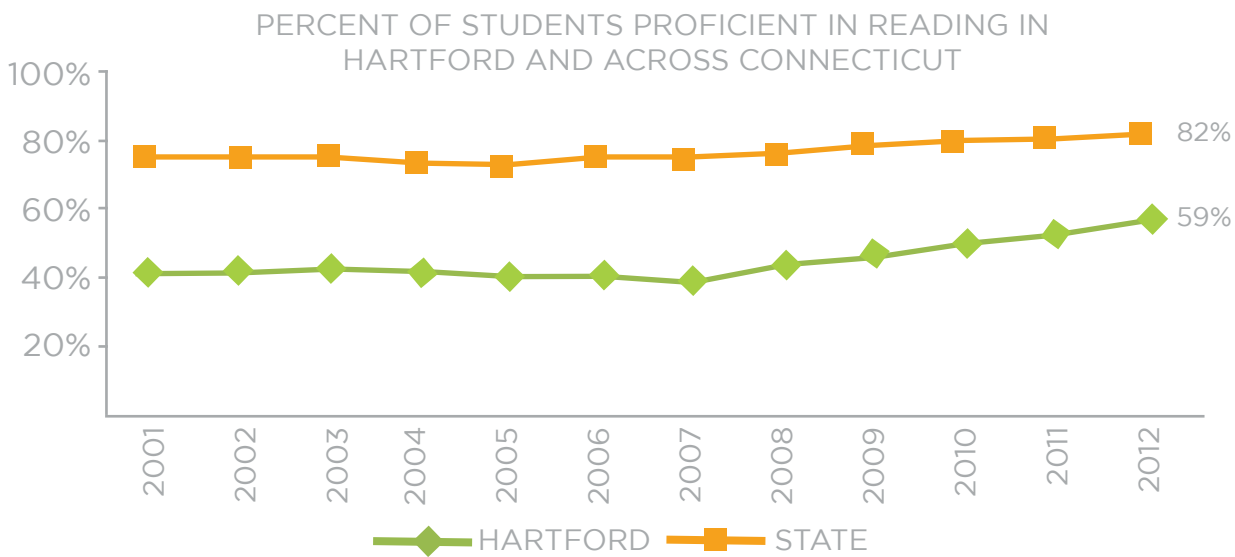
Today's Hartford students are, without a doubt, performing better on state assessments than 10 years ago and even 5 years ago. Since 2006–07, the performance gap between Hartford students and students statewide declined by more than 10 percentage points (one-third).

As the district moves ahead on this next phase of reform, new challenges arise. Math scores across the district are leveling off. ELL students have closed the achievement gap with state ELL students but still lag significantly behind native English-speaking peers. Graduation rates have increased but not steeply enough, and still too many students fail to graduate on time.

Hartford students made great improvements in reading over the last 5 years. In 2007, the district lagged 35 percentage points behind the state in the percent of students proficient in reading. Steady improvement beginning that year has reduced the gap with the state to 23 percentage points in the spring 2012 assessments.

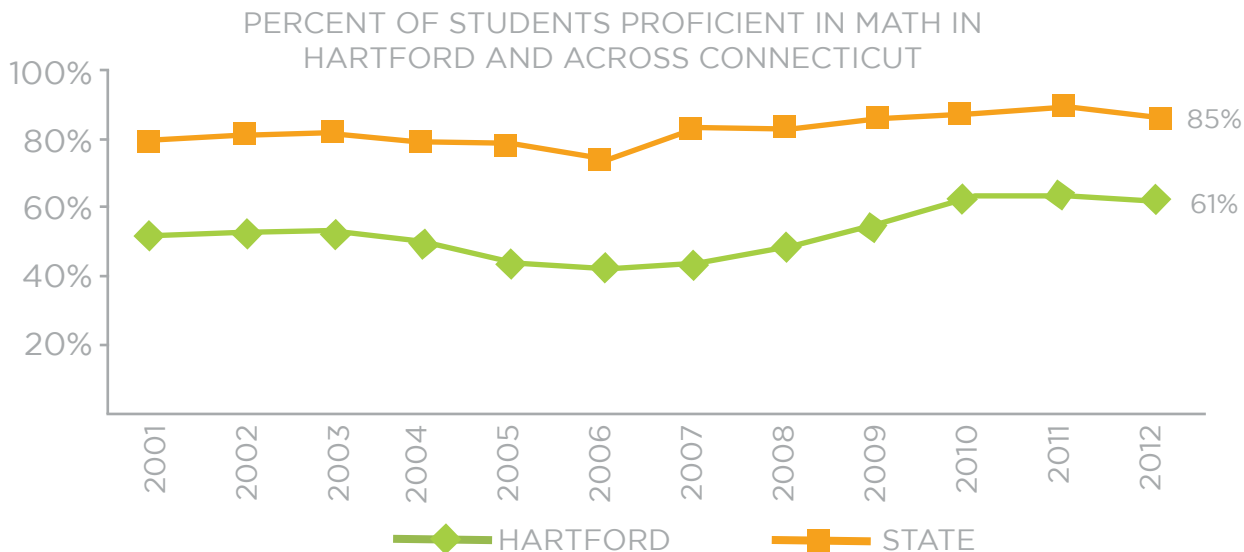
Hartford also made important improvements in math performance since 2007, when the district lagged behind the state in students scoring proficient by 34 percentage points. After substantial leaps made from 2007–10, that gap narrowed to 23 percentage points in 2010. Recently, however, the district's progress in math seems to have stalled at 24 percentage points behind the state.

Figure 4. Hartford has made significant improvement in reading performance since 2006



Note: The test for grades 3 to 8 changed in the 2005–06 school year, changing the test design and the grades tested. The grade 10 assessment changed in the 2006–07 school year.

Figure 5. Hartford has made notable gains in math since 2007, but those are leveling off



Note: The state test for grades 3 to 8 changed in the 2005–06 school year, changing the test design and the grades tested. The grade 10 assessment changed in the 2006–07 school year.

Outcomes for special populations

The performance of special education students improved in both reading and math and in all grade levels. The gains by Hartford's special education population generally kept pace with special education

students across the state in reading. In math, however, Hartford's special education students far exceeded the gains made by special education students statewide.

Figure 6. Special education students are outpacing statewide peers in math, but just keeping pace in reading

CHANGE IN % PROFICIENT AMONG SPECIAL EDUCATION STUDENTS 2006-07 TO 2011-12

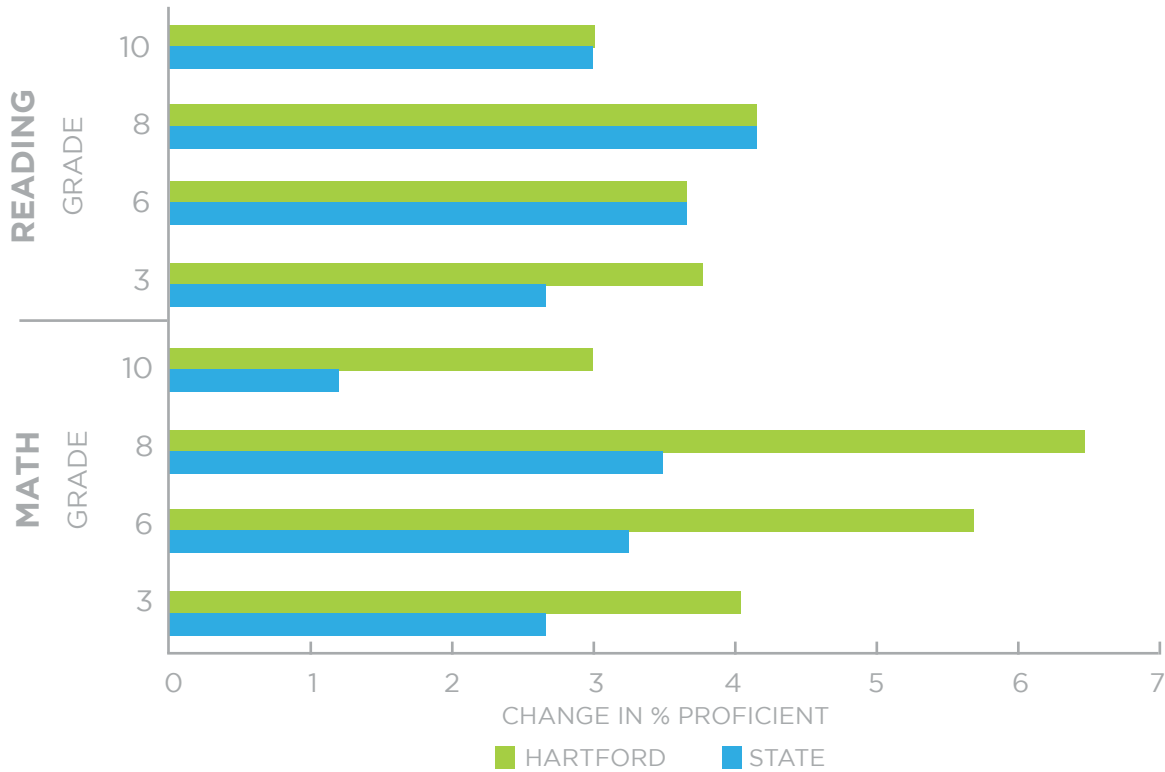
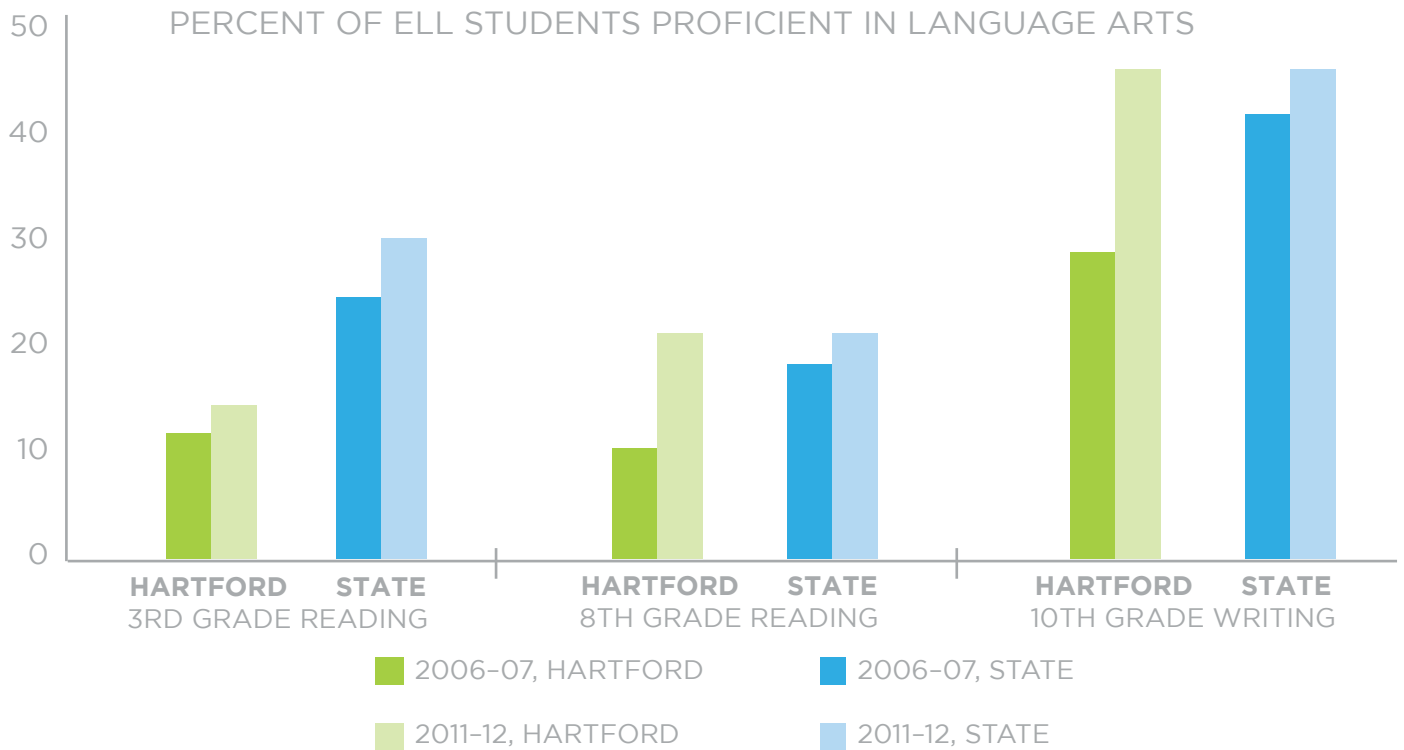


Figure 7. Middle and high school ELL students have closed the achievement gap with their peers at the state level



Today 17 percent of Hartford’s students are designated as ELL, more than three times the statewide average (five percent.) Since 2006–07, Hartford’s ELL students have closed the gap with the state’s ELL students in 8th and 10th grade reading and writing.

However, Hartford’s ELL students still lag far behind the district’s native English-speaking peers—a situation that exists across the state. For example, in 2012,

non-ELL students in the district’s elementary and middle schools out-performed their ELL peers by 40 and 48 percentage points, respectively. In the 10th grade, the share of ELL students scoring proficient or better lagged by 32 percentage points. These gaps are smaller than they were in 2006–07, yet they persist.

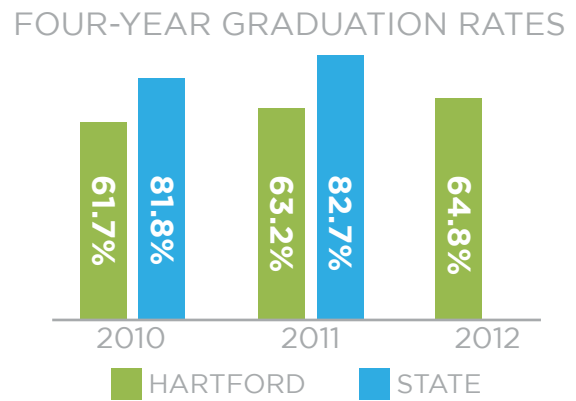
Graduation and preparation for college

Beginning with the 2010 graduating class, the state and district adopted a new methodology for calculating graduation rates. This new methodology uses the federally prescribed four-year adjusted cohort graduation rate, but it prevents comparisons to data reported in years prior to 2010. As measured by this new methodology, Hartford's graduation rate shows steady improvement of about 1.5 percentage points each year, reaching 64.8 percent in 2012.⁸ This rate of increase is slightly faster than the state, though Hartford's 2011 cohort (the last year for which we have a state comparison) still lagged in overall graduation rate by 20 percentage points.⁹

Notably, however, in the 2010–11 graduating class, 71 percent of African American students graduated on time, exactly on par with their peers across the state. In contrast, only 53 percent of Hartford's Hispanic students graduated on time, below the statewide Hispanic graduation rate of 64 percent. Additionally, only 47.1 percent of ELL students in Hartford graduated in four years, and the challenge to step up graduation persists as more than one in three Hartford students is not graduating on time.

The share of students taking the SAT is an important gauge for the district's college-going expectations: the SAT is a gateway to college enrollment and necessary to gain access to the nation's selective universities.¹⁰ Unfortunately, low-income urban students often don't take this important step, virtually eliminating their opportunities to go to four-year college.¹¹

Figure 8. Hartford's graduation rates increase each year, but one in three students fails to graduate in 4 years

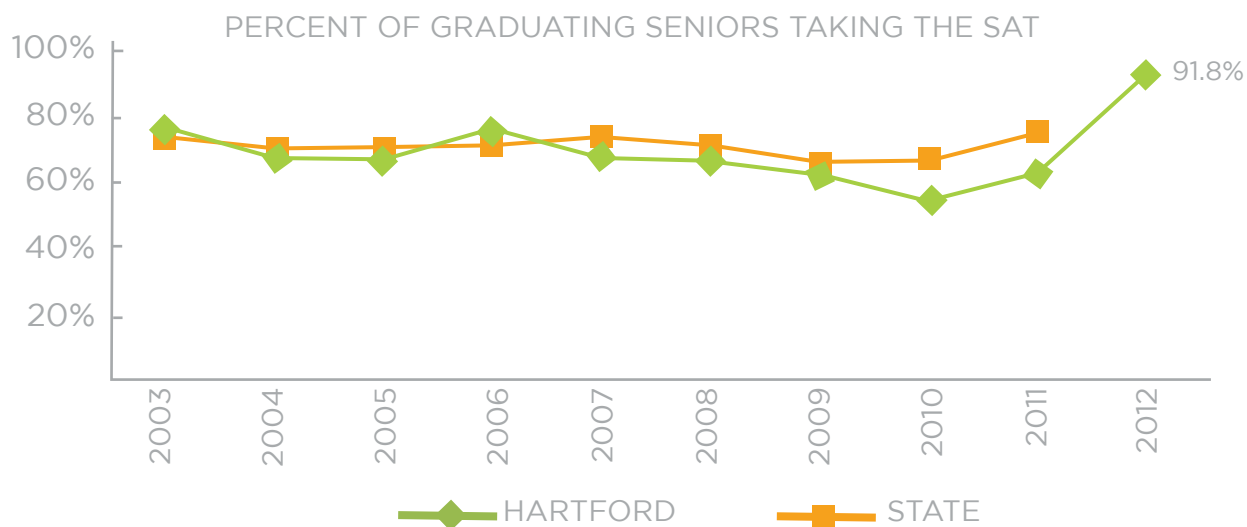


Note: Data from the 2012 cohort are not yet available for the state.

Between 2007 and 2011, a smaller share of Hartford seniors took the SAT than did students statewide. In 2011, only 62 percent of Hartford seniors took the SAT.

To boost SAT participation, Hartford Public Schools partnered with the College Board to host free SAT testing for juniors and seniors in 2012. Almost 92 percent of the 2012 graduating class in Hartford took the SAT—an increase of 30 percentage points over the graduating class of 2011 (a statewide summary is not yet available). In-district administration of the SAT has the potential to increase college-going—a similar initiative in Illinois requiring all students to take the college entrance exam increased the state's overall college-going numbers.¹²

Figure 9. Hartford boosts SAT-taking with in-district administration



8. Of students that have not graduated on time, 17 percent remain enrolled in the district. Many of these continuing students are placed in special education programs with individualized education plans stipulating continued enrollment—this holds true in other districts as well.

9. The official state rate will be released in mid-2013.

10. Daniel Klasik, "The College Application Gauntlet: A Systematic Analysis of the Steps to Four-Year College Enrollment," *Research in Higher Education* 53 (2012), 506–549.

11. Christopher Avery and Thomas J. Kane, "Student Perceptions of College Opportunities: The Boston COACH Program" in *College Choices: The Economics of Where to Go, When to Go, and How to Pay For It*, ed. Caroline M. Hoxby (Chicago, IL: University of Chicago Press, 2004), 355–91.

12. Daniel Klasik, "The ACT of Enrollment: The College Enrollment Effects of State-Required College Entrance Exam Testing," *Educational Researcher* 20, no. 10 (2013), 1–10.

Next Steps

New school opportunities and student achievement outcomes have improved in many ways since Hartford Public Schools launched its portfolio strategy in 2006–07. Students have more quality school options, all student populations increased test scores, and the graduation rate is rising. The district has made significant gains, and educators, students, and their families have much to be proud of.

It cannot be overstated how far behind the rest of the state the district was in 2006–07: Hartford was the lowest-performing district in the state, with two in five students proficient in reading and only slightly more proficient in math. Today, 60 percent of Hartford’s students are scoring proficient in reading and math—a nearly 50 percent increase since 2006–07. Hartford, however, remains among the lowest-performing 5 percent of districts statewide.

But as the district implements the second phase of reform, it faces new challenges. Math scores across the district are leveling off. ELL students closed the achievement gap with state ELL students but still lag significantly behind native English-speaking students. Graduation rates increased but not steeply enough to close the gap with the state, and still too many students fail to graduate on time. To address these findings, the district might consider the following:

1. Take advantage of the portfolio strategy to launch effective school models

Hartford set the portfolio strategy in motion through its accountability system and school redesign process, but is seeing mixed success with these schools. The district should assess these schools to understand why some are struggling to achieve, and rethink its selection process. It could borrow from the charter school authorizer playbook by seeking high quality school applications (both traditional and charter school) that

specifically address Hartford’s need for strong math programs and effective ELL instruction, all grounded in a serious college-going culture.

2. Continue increasing quality seats

Hartford has made progress in growing the number of quality seats across the district. Hartford should continue to track quality seats and pay attention to fair access for special populations. It can continue to increase quality seats by scaling up and replicating successful schools, seeking out promising future leaders from successful schools to start or take over struggling programs, affiliating with high-performing charter schools, and expanding higher-performing schools to enroll more children.

3. Focus on math

Across the district, where once math performance was taking off, it has stalled out over the last two years. The redesigned schools have struggled in math, and a district-wide focus on math is warranted.

Overall, Hartford students are not progressing through the math curriculum as quickly as students across the state. In 2011, only 19 percent of 8th grade students took advanced math in Hartford, in contrast to 34 percent of 8th graders statewide. While just taking the class doesn’t entirely predict performance in subsequent math curriculum,¹³ being prepared for and taking courses like algebra in the 8th grade can lead to greater math achievement throughout high school.¹⁴

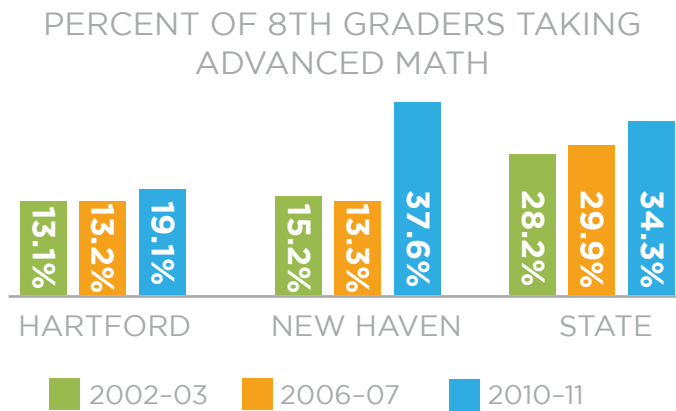
Of course, district-wide mandates are not in keeping with the portfolio approach to district management of autonomous schools. The district should be careful not to require specific courses or curriculum. Instead, district leaders should help schools examine the math performance in their own schools, help them find the tools they need to address weaknesses, and do whatever it can to share the practices that are yielding

13. Charles T. Clotfelter, Helen F. Ladd, and Jacob L. Vigdor, *The Aftermath of Accelerating Algebra: Evidence from a District Policy Initiative*, NBER Working Paper No. 18161 (Cambridge, MA: National Bureau of Economic Research, 2012).

14. See e.g., Adam Gamoran and Eileen C. Hannigan, “Algebra for Everyone? Benefits of College-Preparatory Mathematics for Students with Diverse Abilities in Early Secondary School,” *Educational Evaluation and Policy Analysis* 22 (2000), 241–254; K. L. Filer and M. Chang, “Peer and Parent Encouragement of Early Algebra Enrollment and Mathematics Achievement,” *Middle Grades Research Journal* 3, no. 1 (2008), 23–34; Sharif Shakrani, “Eighth-Grade Algebra Course-taking and Mathematics Proficiency. NAEP FACTS 1, no. 2 (Washington, DC: National Center for Educational Statistics, 1996); and Jill Walston and Jill Carlivati McCarrroll, *Eighth Grade Algebra: Findings from the Eighth-Grade Round of the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K)*, National Center for Education Statistics Publication 2010–016 (Washington, DC: NCES Institute of Education Sciences, October 2010).

improvements for other schools throughout the district. Hartford should also seek providers (traditional and charter) who know how to get math results, via online curriculum, blended learning designs (online and small group instruction), or other methods and have a history of high math performance. Additionally, Hartford students should be encouraged to take key gateway math courses online, especially if they have missed a sequence, are out of sync, and would otherwise be unable to catch up to their peers.

Figure 10. Hartford lags behind the state and other cities in taking advanced math courses



4. Seek out solutions for ELL challenge

Hartford faces some significant challenges in educating its ELL students as evidenced by the low achievement and graduation rates of ELL students. Hartford’s ELL students are not a homogenous group—students come to the district speaking many home languages and include older students who have never attended school and are not literate in their own first language. These challenges call for creative solutions, including trying many different approaches to see where there is traction, with an emphasis on personalization for the students. With so many unique needs, blended learning programs that offer language and math online and with small group instruction may move students ahead faster. Hartford could launch an RFP process to attract creative, promising programs and carefully evaluate their outcomes, while exploring ways to scale up.

5. Press for graduation and college-going

One lagging indicator of decades of low achievement is Hartford’s dismal record of college-going—only 14 percent of Hartford residents 25 years of age and older have a Bachelor’s degree or higher, compared to 35 percent in Connecticut.¹⁵ Hartford Public Schools has placed a priority on remedying this deficit through its second phase of reform and would do well to investigate its college-readiness challenges seriously, by:

- Addressing some of the prior recommendations in this report (focus on math and math course-taking) and commissioning a rigorous and strategic study of math and graduation rates to see where Hartford is struggling and how the district could improve.
- Adopting best practices from the high-performing charters that are having the greatest effect: a focus on a culture of high expectations and supports for getting students to graduate and go on to college through motivation and behavior systems and a “no excuses” environment.
- Seeking out and attracting high school providers (both traditional and charter) with a proven track record in getting students ready for college and careers.
- Supporting students and families with the cultural and procedural challenges of college preparation (visiting schools, applying to colleges, filling out financial aid applications, mentoring by current college students).
- Increasing SAT preparation to raise low test scores and continue to provide access (free test-taking during school hours).
- Supporting college persistence (building cohort support at frequently attended colleges, continued support with the financial aid process).

15. Data come from the US Census, accessed on April 19, 2013, <http://quickfacts.census.gov/qfd/states/09/0937000.html>. Importantly, city leaders contend that this number under-represents the number of college graduates who previously attended Hartford public schools, suggesting that many students earning a Bachelor’s degree do not return to Hartford.