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Strategies to Improve Low-performing Schools under the Every Student Succeeds Act

How 3 Districts Found Success Using Evidence-based Practices

By Chelsea Straus and Tiffany Miller March 2016

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Introduction and summary

Almost six years ago, Terry Grier, former superintendent of the Houston Independent School District, or HISD, faced a challenge that district leaders across the country confront each year: how to dramatically improve student achievement in the lowest-performing schools. Texas state law offered Grier four options to turn around nine low-performing secondary schools in the Houston school district: allow a charter management organization to reopen the schools; implement programmatic changes; close the schools entirely; or reconstitute the schools. Wanting to demonstrate that it is possible to improve failing schools within the constraints of the traditional public school system, Grier chose the final option.[1]

In a recent interview, Grier said he immediately realized that he could not undertake a school improvement initiative alone. He shared his concerns with a friend who recommended that he reach out to renowned economist Roland G. Fryer, Jr., who is the youngest African American professor to receive tenure at Harvard—at the age of 30—and is also a MacArthur Fellowship, or "Genius Grant," recipient.[2] For Fryer, the work of providing all children the chance to obtain an excellent education is personal. Abandoned by his mother at a young age and raised by an abusive father, Fryer's life was literally saved by a caring teacher. Today, he is relentless in his determination to close the racial achievement gap and provide all students the chance to succeed.[3]

As part of his recent research on models of effective schooling, Fryer identified five practices that largely explain significant student achievement gains in high-performing charter schools.[4] Grier read Fryer's groundbreaking research and wasted no time in calling him about partnering to tackle the turnaround of HISD's failing schools.

As fate would have it, Fryer was in Houston when Grier called and the two men decided to meet in person. Fryer was cautious at first. He knew that his research could have a substantial effect on schools, but he found that many district leaders were reluctant to implement such comprehensive reforms. After all, Fryer

understood that implementing his research would require significant political will among district and school leaders, not to mention the dedication and hard work of educators. Sensing Fryer's hesitation, Grier offered this reassurance: "I'm serious. … We are willing to take this on."[5]

Shortly thereafter, Fryer came to a decision and headed straight to a nearby mall to buy some extra clothing: There was no turning back now, he was staying in Houston. Less than 24 hours after their initial meeting, Fryer and Grier began developing a comprehensive plan to improve student achievement in the district's nine lowest performing secondary schools and 11 underperforming elementary schools. Fryer recalled: "It was the perfect storm between me, who really wanted to do this work and appreciated how hard it was because others [district leaders] were not willing to take the lead, and Terry, who had just inherited several schools that the state was going to take over if he didn't do something."[6]

What came next was the 2010 launch of HISD's Apollo 20 program, the nation's first large-scale effort to implement high-performing charter school practices in a traditional public school environment. Based on Fryer's research on effective schooling models, the Apollo 20 program implemented the following best practices of high-performing charters:

1. Data-driven instruction
2. Excellence in teaching and leadership
3. Culture of high expectations
4. Frequent and intensive tutoring, or so-called high-dosage tutoring
5. Extended school day and year

An evaluation of the Apollo 20 program found that infusing these high-performing charter school best practices into HISD schools had a statistically significant effect on math achievement that rivals student-achievement gains in math of high-performing charter schools.[7]

Following the creation and implementation of the Apollo 20 program, the Denver Public Schools district, or DPS, and Lawrence Public Schools, or LPS, in Massachusetts, also chose to pursue their own similar but customized approach to turning around low-performing schools. Fryer worked with DPS to implement high-performing charter school practices in 10 chronically underperforming schools that comprise the district's Denver Summit Schools Network, or DSSN. LPS pursued a districtwide turnaround that focused on improving schools within the existing structure, but nonetheless employed the high-performing charter best practices.

Each school district operated within a unique context and pursued differing approaches to implementation of their turnarounds. Yet, each district experienced student achievement gains. For example, prior to LPS's school turnaround initiative, the district's math and English language arts, or ELA, proficiency rates fell within the bottom 1 percent of school districts in Massachusetts.[8] Since the implementation of similar, high-performing charter practices, the district's student math proficiency rate increased 16 percentage points and its ELA proficiency rate increased 4 percentage points.[9] Likewise, DPS elementary schools in the DSSN increased their math proficiency rate by 18 percentage points and their reading proficiency rate by 11 percentage points over the course of two years.[10]

Achieving this success was not easy. All three of the school districts faced significant challenges around the issues of talent, politics, time, and money. Barriers to implementation included recruiting and training exemplary teachers and leaders; securing stakeholder investment, or buy-in; allotting sufficient planning time for the implementation of the high-performing charter practices; and financing the reforms. These sorts of challenges too often dissuade many traditional public schools and districts from attempting to implement comprehensive reforms. However, HISD, DPS, and LPS found a way.

For other districts with low-performing schools, the recent passage of the Every Student Succeeds Act, or ESSA, presents an opportunity to implement similar comprehensive, evidence-based school improvement strategies. ESSA is the nation's major law governing the K-12 public education system, replacing the outdated No Child Left Behind Act, or NCLB. Under the new law, states and districts are required to provide comprehensive support and improvement to: the lowest-performing 5 percent of schools, high schools that fail to graduate one-third or more of their students, and schools in which subgroups perform at the same level as students in the lowest-performing schools despite local interventions.[11]

Although the new law requires districts to implement evidence-based interventions in under-performing schools, states and districts have a great deal of discretion in their approach to improving schools. ESSA also provides districts with wide latitude to develop and implement their school improvement plans. This flexibility presents an opportunity for state and local leaders to innovate. As the decisionmaking process gets underway, states and districts should take a closer look at the reform efforts of the Houston, Denver, and Lawrence public schools, which have implemented school-improvement strategies and experienced student achievement gains.

This report documents and analyzes how these three different school districts overcame significant obstacles to implement strategies and ultimately produce outcomes that many believed were only achievable in high-performing charter schools. Further, this report highlights the policy context and external partnerships that enabled the success of each district's school improvement plan. Finally, this report offers evidenced-based examples of school improvement that states and districts should consider as they start to implement ESSA.

This study has two goals: to obtain a better understanding of the strategies that led to successful implementation of these practices in many schools in Houston, Denver, and Lawrence, and to identify key themes across each school district that could help other district and school leaders achieve similar results.

The authors selected seven schools across the three districts for more in-depth study. For these seven schools the authors collected comprehensive data about the how and why districts and schools pursued certain strategies to overcome turnaround implementation obstacles related to the five practices. The sample of schools was purposeful. The authors examined the student achievement data of each school included in the turnaround initiatives—and in LPS, each traditional public school in the district—to select schools that have made notable academic gains since implementing these practices. In each district and school, the authors conducted interviews with the key stakeholders, including district superintendents, school leaders, external partner organizations, union leaders, school board members, and district staff. From that effort came the following findings, referred to in the report as lessons learned:

- **More planning time results in a smoother implementation process.** While time can be a significant obstacle to implementing these practices, districts and external partners examined in this report worked swiftly to plan and implement practices associated with high-performing charter schools. However, it became clear that allotting at least one year for planning eases the implementation process.

- **Districts used school-level budgeting and strategically reallocated funds based on student needs.** School-level budgeting was integral in two ways. First, it ensured that school leaders were able to fill teaching positions that best fit student needs. Second, it allowed school leaders to tailor implemented practices to a particular school.

- **Districts, school leaders, and external partners aggressively recruited, hired, and trained innovative teachers and leaders.** These school leaders would be able to use their autonomy to effectively infuse high-performing charter school practices into low-performing schools. School leaders then identified and hired teachers who are resilient, hardworking, and dedicated, and also able to work with diverse populations, have a thorough understanding of high-quality instruction, and maintain high expectations for students.

- **Data and word-of-mouth are powerful tools for obtaining stakeholder investment.** Parents and other stakeholders who share details about school reforms and improvements in everyday conversations are the most effective at convincing stakeholders that implementing high-performing charter school practices is an effective school improvement strategy.

- **High-performing charter school practices spread throughout districts.** Practices associated with high-performing charter schools are no longer confined to only targeted underperforming schools in Houston and Denver. The success experienced by the schools implementing the best practices and the resulting student achievement gains sparked the Houston and Denver districts to expand data-driven instruction and tutoring to many of their schools.

The above key findings, as well as an analysis of interview data, inspired the following recommendations:

- **States should use the new 7 percent set-aside fund under Title I, Part A of ESSA to implement a targeted strategy focused on a subset of the lowest-performing schools.** Spreading the money among all schools that have been identified as low-performing will not yield enough funding per school to significantly support aggressive improvement strategies. Instead, states should employ a targeted strategy, such as a sequencing approach that begins with schools facing similar challenges or those that are geographically close to each other.

- **Districts should give leaders of schools identified for improvement greater autonomy over school budgets and spending.** As districts create school improvement plans for low-performing schools under ESSA, it is key that school leaders are provided the autonomy to craft school budgets and spend funds based on their school's needs.

- **Districts should give school leaders hiring autonomy.** In creating ESSA school improvement plans, districts should provide school leaders with hiring autonomy over their teaching staff. School leaders should use the recruitment and hiring practices employed by high-performing charter schools, including the use of data to drive hiring decisions of teaching staff. These practices include screening applicants for their resilience, work ethic, high expectations for students, effect on student learning, past achievement, and leadership.

- **Districts should implement intensive leadership and teacher training programs that resemble professional development provided to high-performing charter school leaders and teachers.** High-performing charter schools' leadership training programs differ from professional development in most public schools in that they train principals to be sophisticated consumers of data and to use data analysis to improve instruction; teach school leaders how to perform observations and provide actionable feedback; and help principals learn how to tackle administrative concerns, such as managing budgets and student enrollment.[12]

- **District leaders should plan and conduct town halls, church events, and meetings with parents and other stakeholders to secure community investment—buy-in—early in the turnaround process.** While school leaders and districts may choose different approaches to securing stakeholder investment, developing a cohesive communications strategy must be a key priority from the start of the planning process so that community members understand the impetus behind implementing these practices.

The Houston, Denver, and Lawrence school districts were trailblazers in implementing a suite of new reforms within the constraints of a traditional public school system. If other districts follow the lead of these three innovative districts, they, too, could realize dramatic student achievement gains. It is our sincere hope that district and school leaders contemplating similar comprehensive reforms will use this report as a resource to avoid obstacles as they seek to successfully navigate the implementation process and set the structure to improve low-performing schools under ESSA.

Injecting high-performing charter school practices into traditional public schools

Evidence-based research

According to Roland Fryer's research, elementary school students who attend high-performing charter schools gain an additional 46 days of learning in math and 35 days of learning in English language arts, or ELA, each year. Students at high-performing charter middle schools gained 37 days of learning in math.[13] Intrigued by the academic achievement results of high-performing charter schools, Fryer and his colleague, Will S. Dobbie, a Princeton University economist and faculty research fellow at the National Bureau of Economic Research and Harvard University EdLabs, investigated how these charter schools attained such impressive results. The researchers found that five practices significantly explained the notable academic achievement results for low-income students attending high-performing charter schools:

1. Data-driven instruction
2. Excellence in teaching and leadership
3. Culture of high expectations
4. Frequent and intensive tutoring, or so-called high-dosage tutoring
5. Extended school day and year[14]

Examining these practices in New York City charter schools, Fryer and Dobbie found that teachers at high-performing charter elementary schools received feedback 1.5 times more often than teachers at other elementary charter schools. When they looked at high-performing charter middle schools they found that teachers at those schools received feedback more than twice as frequently as teachers at other charter middle schools. Fryer and Dobbie's research also revealed that high-performing charter schools have higher parental engagement rates and more instances of high-dosage tutoring than other charter schools. High-performing charter schools also have approximately 26 percent more instructional hours than an average New York City district school. In addition, high-performing charters are more likely to have higher academic and behavioral expectations for students.[15]

Other rigorous studies of charter schools have found similar academic achievement results, especially among urban charter schools. The Center for Research on Education Outcomes, or CREDO, for instance, found that students at urban charter schools gained 40 additional days of learning in math and 28 additional days of learning in reading compared to peers in traditional public schools.[16] Similarly, Mathematica Policy Research found that the nationally recognized Knowledge Is Power Program, or KIPP, charter network is improving outcomes for many low-income students across the country. KIPP experienced average increases of 10 percentile points in middle school students' math scores and average increases of 7 percentile points in middle school students' reading scores over a two-year period. At the high school level, new KIPP students experienced an average 11 percentile point increase in math and 7 percentile point increase in ELA scores.[17]

Houston Independent School District, Denver Public Schools, and Lawrence Public Schools all required aggressive and comprehensive action to turn around low-performing schools. These districts chose to infuse high-performing charter school practices into their traditional public schools and subsequently experienced significant student achievement results. The following sections provide information on the policy context, external partnerships, and key reforms implemented in each of these three districts during their separate turnaround efforts. The student achievement gains in many schools in these districts provide substantial evidence that implementing high-performing charter school practices is an effective school improvement approach in traditional public schools.

The Every Student Succeeds Act: School improvement provisions

The ESSA requires states and school districts to identify and provide comprehensive support and improvement to:

- The lowest-performing 5 percent of schools
- High schools that fail to graduate one-third or more of their students
- Schools in which subgroups of students perform at the same level as students in the lowest-performing schools, despite local interventions

At least once every three years, states must identify schools that need improvement. States are then responsible for monitoring the progress of improvement efforts and either exiting schools identified for intervention within four years or intervening in the school improvement activities. However, unlike under the No Child Left Behind Act, or NCLB, states will have a substantial amount of autonomy when it comes to selecting a school improvement strategy. NCLB required a menu of progressively restrictive interventions that included afterschool tutoring and the right to transfer to another school. Under ESSA, the main parameter is that the intervention must be evidence-based; otherwise, districts are free to determine the most effective approach to improving their lowest-performing schools.[18]

While states monitor school improvements, districts are responsible for creating evidence-based improvement plans with the help of teachers, school staff, and parents.[19] The district submits an overview of school improvement plans in an application to the state. The state approves district applications and is responsible for periodically reviewing school improvement resource allocations. States also provide technical assistance to districts with a large number of underperforming schools and create a "statewide exit criteria."[20] The exit criteria specifies the protocol for determining whether districts are adequately improving student achievement in low-performing schools. If a state finds that certain schools are not making sufficient progress, then the state decides the next steps in the school improvement effort. States have the autonomy to determine when to intervene in unsuccessful school improvements—but states must take action within four years.

States and districts receive funds to improve low-performing schools through the Title I funding formula. ESSA does not include specific funding for the School Improvement Grant, or SIG, program, which previously supplied funding for states and districts to enact school improvement initiatives. However, a nearly identical amount of funding is available for states and districts to allocate toward school improvement through the Title I, Part A funding pot. Under ESSA, states must devote 7 percent of Title I, Part A funding to school improvement initiatives, with at least 95 percent of that funding directed to districts with low-performing schools.[21]

Methodology

This report examines the strategies that the Houston Independent School District, Denver Public Schools, and Lawrence Public Schools used to successfully implement high-performing charter school practices within the constraints of a traditional public school system. HISD was selected because it was the first traditional public school district to implement high-performing charter school practices in conjunction with a rigorous evaluation. DPS was chosen because the district implemented the same set of practices as HISD's Apollo 20 program but within a different environment that included distinct laws and community dynamics. LPS was included as a contrast to HISD and DPS; LPS implemented similar practices, but these practices were not based on the Apollo 20 program. LPS also implemented the high-performing charter school practices in schools throughout the entire district.

Across the three districts, seven schools were selected based on student achievement data. The authors interviewed key stakeholders from each district and selected school. These interviews provided relevant information on how these schools were able to overcome barriers and implement high-performing charter school practices. In the summer of 2015, the authors interviewed district leaders, school leaders, school board members, union leaders, and external partner organizations. These interviews shed light on how districts and schools overcame barriers related to planning time, budgeting, recruiting and training talented teachers and leaders, and securing stakeholder investment and buy-in. Through an analysis of the interview data, the authors identified key themes across the interviews and created a resource for future district and school leaders to use during the planning and implementation of high-performing charter school practices.

The authors culled quotes from district officials, school leaders, teachers, and others, along with specific district and school related data, from the interviews noted above.

Houston Independent School District

Students in HISD's Apollo 20 elementary schools gained more than four months of learning in math per year and students in secondary schools gained almost 3.5 months of learning per year in math.[22] These results are reflective of student achievement gains in high-performing charter schools. As part of the Apollo 20 program, the district implemented the five practices that explained significant student achievement results in high-performing charter schools—data-driven instruction, excellence in teaching and leadership, culture of high expectations, high-dosage tutoring, and increased instructional time.

"This sounds like the same old common sense. We know what to do. The question is: Do we have the courage to do what we know?"

—Terry Grier, former superintendent, Houston Independent School District[23]

Texas law specifies that the state must reconstitute schools that underperform for two consecutive years. If a school continues to underperform for a third consecutive year, the state's commissioner of education then has the ability to repurpose, close, or find new management for the school.[24]

The law forced these schools to change their practices, and this helped Terry Grier ease tensions around implementing high-performing charter school practices in HISD schools. Schools that were designated as part of the Apollo 20 program continued to function as part of HISD, but school leaders had increased autonomy over staffing decisions and received additional funding to implement best practices.

HISD partnered with Fryer and his organization, EdLabs—a laboratory affiliated with Harvard University that is focused on education research and development—to implement the Apollo 20 program and turn around HISD's nine lowest-performing secondary schools and eleven underperforming elementary schools.[25] According to Grier, "It's hard to have the political will to do this alone." He recognized the importance of having an external partner to help with the planning and implementation of a comprehensive school turnaround strategy and to serve as an ally during political battles.

Fryer and Grier worked tirelessly to form a comprehensive implementation plan, gain stakeholder investment, and secure funding for the program. During implementation, EdLabs conducted four to six visits each school year to Apollo 20 schools. EdLabs observed classroom instruction, conducted focus groups, and provided feedback to school leadership. Following each visit, school leaders received information that highlighted areas in need of improvement as well as the school's strengths.

Denver Public Schools

DPS implemented the same overarching practices employed by HISD's Apollo 20 program. As noted earlier, these practices include: data-driven instruction; excellence in teaching and leadership; culture of high expectations; high-dosage tutoring; and increased instructional time. Following the infusion of these practices, elementary schools in the Denver Summit Schools Network increased math proficiency 18 percentage points and increased reading proficiency 11 percentage points over the course of two years.[26]

Under Colorado's 2008 Innovation Schools Act, schools in the state are able to apply individually or as a network to receive innovation status. The designation of innovation status gives school leaders increased flexibility, granting them autonomy over budgeting, staffing, and curricula so that they can effectively serve their students.[28] All schools currently in DPS's DSSN applied for and received innovation status, and thus obtained flexibility from collective bargaining agreements as well as a variety of state and local policies. Schools in Denver's Far Northeast section, where all of the schools in the DSSN are located, were consistently underperforming. DPS created and implemented a comprehensive turnaround plan to improve student achievement in this area of the city.[29] Schools in the DSSN are still part of Denver Public Schools, but DSSN school leaders have the ability to independently structure the school day, make staffing decisions, access extra funding set aside for innovation schools, and determine the curriculum.[30]

Denver Public Schools partnered with Fryer and the Blueprint Schools Network—a spin-off of EdLabs—in order to implement high-performing charter school practices in the DSSN. The Blueprint Schools Network, or simply Blueprint, is a nonprofit organization that helps schools, districts, and states use evidence-based education reform strategies.[31] Blueprint played a critical role in the principal hiring process, launched a math tutoring program called the Blueprint Fellows Program, and served as a thought partner throughout the planning and implementation processes. During implementation, a Blueprint staffer served as a consultant who answered questions for school leaders and identified areas for growth.[32] Blueprint also conducted school site visits during which Blueprint staff observed classroom instruction, led focus groups, and provided feedback to school leaders about the school's strengths and areas in need of improvement. According to DPS Superintendent Tom Boasberg, "These are our schools, we've got to operate and run them, but to have a critical friend is helpful to help learn and challenge us."[33]

The Denver Summit Schools Network is a cluster of schools in Denver's Far Northeast—an area of DPS where schools were chronically underperforming. These schools applied to the state for and received innovation status, which provides flexibility from collective bargaining agreements as well as state and local policies. DPS overhauled the schools and partnered with Blueprint Schools Network to implement high-performing charter school practices in DSSN schools.[27]

Lawrence Public Schools

Prior to LPS's school turnaround initiative, the district's math and English language arts proficiency rates fell within the bottom 1 percent of districts in Massachusetts. Following the implementation of its turnaround plan, LPS's student math proficiency rate increased 16 percentage points and its ELA proficiency rate increased 4 percentage points.[34] LPS implemented practices similar to HISD and DPS, including data-driven instruction, excellence in teaching and leadership, increased instructional time in grades K-8, rigorous standards, and tutoring in two of its high schools.[35]

In 2010, Massachusetts passed a receivership law, which permits the state to take over underperforming school districts.[36] In November 2011, LPS entered into state receivership status due to its consistent, low student achievement results. The receivership status provided Jeffrey Riley, LPS superintendent, with increased autonomy, including the option to restructure the school day and year, reconstitute schools, and alter or suspend teacher contracts and collective bargaining agreements.[37] However, Riley opted not to reconstitute schools and decided to work with the union to reach a collective bargaining agreement. Riley noted that he "found out that they [LPS] had a lot of good teachers," although there was room to grow. For example, he said teachers "had to learn how to use data."

Early on, LPS partnered with Empower Schools—an organization that works with districts to design schools that have flexibilities to best educate students. Empower Schools connected LPS with school-based turnaround partners that had expertise in areas such as extending the school day, student data analysis, and professional tutoring.

LPS refers to its turnaround model as open architecture, which is an alternative model between a traditional public school model and charter school model. Open architecture increases autonomy at the school level while maintaining a small central office for school support and a minimal number of shared policies across the district. The flexible nature of the open architecture model allows a mixture of school types to operate in LPS. While there are policies that apply to schools across the district, school leaders and educators have the ability to shape their individual schools while adhering to these shared standards. For example, LPS has common enrollment practices and equitable funding, but high-performing schools have extraordinary flexibility to determine their school structure and the extent to which the central office or external partners provide extra supports.[38]

Efficient planning and implementation of school improvement strategies

In education, efforts to turn around low-performing schools seldom move quickly. Many reforms take decades before yielding an increase in student achievement. However, leaders in HISD, DPS, and LPS all sought to affect change as soon as possible and wanted to move swiftly with the planning and implementation processes. Roland Fryer and Terry Grier laid the foundation and launched HISD's Apollo 20 secondary school program in a mere 3.5 months. While HISD's Apollo 20 secondary school program had the most efficient planning process, all districts defied the assumption that schools cannot rapidly implement major education reforms. Across each district, planning to implementation phases ranged from 3.5 months to one year, and some schools in these districts realized student gains in only a couple of years. However, the process was not easy. It required, among other aspects, rigorous planning time and flexibility for leaders to make midcourse corrections as needed.

"Plan, plan, plan. There's no such thing as over planning. … Find the very best people that you can who want to do this work, have the skills to do this work, and understand that this work isn't sustainable without pipelines of fresh talent coming with you all the time."

—Debbie Backus, executive director, Denver Summit Schools Network.[39]

Planning and laying the groundwork

Tom Boasberg, superintendent of Denver Public Schools, stated that, "the single most important practice from charters is planning time. … Successful charters really take a year zero and at least a year to plan [with a named school leader]."[40] DPS initially allotted eight to nine months for planning the DSSN's turnaround, and the district soon came to recognize the value of setting aside at least 18 months for a school turnaround. Reflecting on the planning and implementation processes, Boasberg noted, "I think where we struggled was because we gave the eight-month planning time instead of the full 18 or 20 months." He went on to say, "the planning process is incredibly detailed where you're planning all aspects of how you run a successful organization, establish culture, rituals, and routines."[41]

The planning process is critical for a number of reasons. First, sufficient planning time provides a district with the opportunity to engage in ongoing discussions with community members about implementation plans. Second, the planning process is essential for deciding how a successful school will operate and how best to establish the school's culture and routines.[42]

During one of the interviews conducted for this report, a former DSSN elementary school principal described the steps comprising the fast-paced planning process: two to three months to write an innovation plan—which is very similar to developing a charter school plan—staffing the school, presenting innovation plans to the district and state, and overhauling the school building the summer before the implementation of new practices.[43]

"When I walked into that school the first time, it was pretty emotionally upsetting to me because it was dirty, flat, no color, and no bulletin boards in the building. … It wasn't a happy, physically stimulating place," recalled Suzanne Morey, former principal of McGlone Elementary. Morey recognized the importance of a stimulating physical environment and knew that McGlone Elementary was in desperate need of an overhaul.[44]

In an effort to convey a "college-going culture," Morey used the end of her planning period to transform the school and create a physical environment that reflected high expectations. She covered the walls with data charts, goals, posters of students, bulletin boards, and banners. Morey also repainted the building and created a garden next to the school. Not only is the garden aesthetically pleasing, but also the school uses the produce for school lunches and students have the opportunity to help cultivate the garden.

The planning experiences of HISD clearly reflect DPS's primary takeaway: The adequate allotment of planning time improves the implementation process. Notably, adequate planning time is a key practice of high-performing charter schools. HISD had only 3.5 months to plan for the implementation of new practices in Apollo 20 secondary schools, but the district set aside a year of planning time for Apollo 20 elementary schools. The significantly longer planning process for Apollo 20 elementary schools allowed officials to fine tune their approach based on bumps encountered during secondary school implementation.

There are differing opinions, however, about how much time districts should allot for planning. While most HISD interviewees partially attributed the smoother implementation in the elementary schools to more planning time, Fryer asserted, "I would've moved faster not slower … I would've done all 20 schools in year one if I were going to do it all over again."[45] Roland Fryer regrets not being more

aggressive because he believes that looming deadlines spawn productivity. In other words, providing more planning time does not mean that district and school leaders will take advantage of the longer planning period while students continue to attend underperforming schools.

On the other hand, LPS's planning process differed from both the HISD and DPS experience. In January 2012, Jeffrey Riley assumed his position as LPS receiver/superintendent and spent the first six months on the job determining the district's strengths and weaknesses.[46] During this time period, Riley and his team assembled a three-year turnaround plan for LPS after identifying how school autonomy and longer-term systems needed to change to allow schools the ability to make their own decisions.[47] The plan they developed entailed a phased-in turnaround approach that featured a timeline that was established by LPS to implement numerous initiatives. The three phases of the turnaround plan included: immediate actions; targeted supports and enabling conditions; and empowering schools.[48] Programs that LPS planned and implemented during phases one and two of its turnaround were those that would immediately help to increase student achievement, such as vacation academies—a program that provides low-performing students with additional instruction in English language arts or math during school vacations—and dropout engagement initiatives.[49] During phase three of the turnaround plan, LPS focused on substantially increasing school-level autonomy.[50]

Midcourse corrections

While districts used their planning processes to determine implementation details, districts also corrected and deviated from initial plans once implementation was underway. For instance, an extended learning day was an initial component of the Apollo 20 program for secondary schools. The funding and teacher investment for the extended learning day were in place, but Houston Independent School District neglected to secure parent and student buy-in prior to implementation. Students did not understand the impetus behind the longer school day and as a consequence many students simply chose not to adjust their schedules to the earlier start time.[51] Through the implementation process, the district realized that it needed to shift its focus toward ensuring that students recognized and understood the reasoning behind practices such as the extended learning day.[52] When it came time to implement practices in Apollo 20 elementary schools, HISD opted not to incorporate an extended school day into school improvement plans. Overall, the Apollo 20 elementary school implementation went smoother based on what the district learned from the Apollo 20 secondary schools implementation process.[53]

Meanwhile, Denver Public Schools enacted changes throughout the implementation process related to the district's relationship with the Blueprint Schools Network. Working with an external partner required DPS to determine how it could best establish a successful partnership. Learning from the beginning of the implementation period, the district enacted necessary oversight changes to allow for an effective relationship between DPS and Blueprint. DPS also pursued mid-course corrections, including the need to prioritize teacher recruitment and provide school leaders with increased support through improved recruiting systems. [54]

Lesson learned: More planning time results in a smoother implementation process

The experiences of Houston Independent School District, Denver Public Schools, and Lawrence Public Schools make clear that allotting at least one year for planning eases the turnaround implementation process. As noted above, the implementation process was much smoother in the HISD's Apollo 20 program elementary schools than in its secondary schools. The extra 8.5 months of planning time allotted for Apollo 20 elementary schools was key to hiring and training excellent school leaders and teachers, securing stakeholder buy-in, and developing a strategic implementation plan.

Similarly, DPS came to recognize the value of sufficient planning time. While DPS initially set aside only eight to nine months of planning for the Denver Summit Schools Network's turnaround, DPS now allots at least 18 months of planning for any school turnaround.[55]

Districts and external partners all used their planning time to prepare as much as possible for the implementation of high-performing charter school practices. Districts also pursued different implementation approaches based on the method that seemed most effective for implementing these practices in their particular district. The Houston and Denver districts opted to infuse all the practices at once, while Lawrence Public Schools decided to tackle the implementation through a phased-in approach.

Strategic financing of school improvement initiatives

The three districts studied financed school improvement initiatives primarily through a combination of federal grants, private donations, the reallocation of existing budgets, and, in some cases, local tax increases. Contrary to popular belief, these three districts were able to sustain the implementation of these improvement strategies even after originally relying heavily on federal funding from School Improvement Grants, which expired after three years.[57] While the new Every Student Succeeds Act does not include funding for SIG, there is an almost identical amount of funding dedicated to school improvement through Title I, Part A. States are now required to set aside 7 percent of Title I, Part A funding to support school improvement strategies.[58]

However, federal funds were not the only source of additional monies for these districts. In an effort to supplement SIG funding, Fryer and Grier devoted countless hours to community fundraising. They promoted their initiative throughout the city of Houston and were able to bring in additional funding from foundations that believed that the Apollo 20 program was a sound social investment that would reduce future crime.[59]

Strategies for sustaining these school improvement practices with fewer federal dollars varied across districts. For instance, Lawrence Public Schools originally used a combination of funding from SIG and Race to the Top to fund its tutoring program. However, the district is now able to finance its tutoring program predominantly through the local district budget from savings resulted from shrinking the central office by one-third and combing through non-salary items.[60] These actions led to the freeing up of more than $6 million dollars that was previously devoted to central office costs and are now allocated directly to schools.[61] In terms of budget allocations, LPS Superintendent Jeffrey Riley stated that the district, "had to make tough choices. … We had to decide what matters and had to make some tough decisions along the way about what was important and what was negotiable."[62]

"We knew going in that [federal resources] were one time. We planned to use [federal] monies as development monies. We couldn't think of them as ongoing operating dollars. … We've made really hard decisions to say these are our greatest needs and our greatest gaps and we need to prioritize our spending."

—Tom Boasberg, superintendent of Denver Public Schools[56]

Districts also turned to community fundraising efforts as yet another way to finance school improvement initiatives. For example, Suzanne Morey, a former Denver Public Schools elementary school principal, cultivated relationships in the community by setting up meetings with pastors, Boys and Girls Club leaders, and local store and business owners to discuss her school's improvement plan.[63] Many of these relationships became funding partners who helped to sustain school improvement initiatives. In addition, Houston Independent School District, DPS, and LPS all employed school-level budgeting, which provided school leaders with the flexibility to allocate funds based on student needs. This spending flexibility allowed school leaders to create specific teaching positions and implement additional strategies that were beneficial to students.

Lori Butterfield, principal of Lawrence Public School's Guilmette Elementary School, instituted school-level budgeting to direct funds to new resources and initiatives. Specifically, Butterfield used her school's financial autonomy to fund instructional technology such as reading and math technology programs, teacher stipends for teacher leadership positions, and a data team.[64]

With her newly granted ability to direct spending, Butterfield enhanced Guilmette's focus on data-driven instruction by refining the school's data cycle, instituting action planning around using data to drive instruction, and hiring a full-time data and intervention coach. Funds at the elementary school were also used to create stipends for so-called content lead teachers. These teachers are experts in reading, writing, or math, who help improve instruction through the use of their classrooms as demonstration classrooms. They also lead observation and feedback cycles with other teachers in the building. In addition, Butterfield created what she termed interventionists—teachers who conduct in-depth lessons with small groups of students, targeted to their individual needs.

Houston Independent School District's Apollo 20 program

Terry Grier and Roland Fryer knew that in order to implement the Apollo 20 program, they would need to secure a significant amount of funding from a variety of sources. Fundraising was a top priority and started immediately. For Apollo 20 program secondary schools, HISD relied on $26.5 million dollars from School Improvement Grants over a three-year period. The district also raised $17 million through private donations from JP Morgan Chase as well as local foundations and businesses in Houston.[65] After federal funding decreased, the district was able to continue financing these practices primarily through the local school budget process.[66] However, HISD implemented high-performing charter school practices in Apollo 20 program elementary schools without additional funding from federal grants or private donations.[67]

TABLE 1

Houston Independent School District's Apollo 20 program budget

Funding source	Amount/percent of total budget				
	2011	2012	2013	2014	2015
General fund	N/A	$1,436,505 8.44%	$1,447,520 7.40%	$18,018,422 94.42%	$17,736,513 94.11%
Private donations	$5,485,317 42.99%	$5,565,068 32.69%	$6,392,269 32.69%	$10,584 0.06%	N/A
Texas Title I Priority Schools grants, or federal School Improvement Grants	$7,275,384 57.01%	$8,757,701 51.44%	$10,470,384 53.54%	N/A	N/A
No Child Left Behind Act Title I, Part A funding	N/A	$1,265,637 7.43%	$1,246,601 6.37%	$1,054,580 5.53%	$1,109,990 5.89%

Source: Houston Independent School District, "Summary of Apollo Budget by Fund." Data available upon request to the Houston Independent School District's Public Information Office.

Denver Public Schools' Denver Summit Schools Network

The DSSN initially relied on $3.8 million dollars from School Improvement Grants to help finance the implementation of practices associated with high-performing charter schools. However, when SIG funding phased out, the Denver school district devoted recurring funds to help finance the DSSN's extended school day and year. In 2012, the district also passed a $15.5 million mill levy for instructional support to continue financing its tutoring program in the DSSN and expand the program districtwide.[68]

TABLE 2

Denver Public Schools' Denver Summit Schools Network budget

Funding source	Amount/percent of total budget			
	2011–12	2012–13	2013–14	2014–15
General fund	$0.91 million 10.41%	$1.06 million 15.01%	$2.92 million 45.48%	$3.18 million 51.46%
Philanthropic	$1.63 million 18.65%	$2.10 million 29.75%	$1.50 million 23.36%	$1.00 million 16.18%
Federal grants, or School Improvement Grants	$1.90 million 21.74%	$1.90 million 26.91%	N/A	N/A
Other federal funding	$4.3 million 49.20%	$2.00 million 28.33%	$2.00 million 31.15%	$2.00 million 32.36%

Source: Data available upon request to Denver Public Schools.

Lawrence Public Schools

LPS finances the majority of its school improvement initiative, including tutoring, an extended day and year, and enrichment programs—through the local budget. LPS was able to secure more than $6 million in the local budget to fund the implementation of charter best practices—$1.6 million the first year and another $5 million the second year—by reducing the central office staff by one-third and combing through nonsalary items for savings.[69]

TABLE 3

Lawrence Public Schools' budget

Funding source	Amount/percent of total budget		
	FY 2013	FY 2014	FY 2015
General fund	$152,199,471 86.68%	$157,829,518 87.54%	$167,455,547 88.76%
Title I/IIA	$9,082,421 5.17%	$8,860,933 4.91%	$8,835,402 4.68%
Race to the Top	$1,949,586 1.11%	$3,476,383 1.93%	$1,247,040 0.66%
School redesign grants	$3,422,567 1.95%	$3,491,707 1.94%	$2,423,894 1.28%
Other grants	$8,939,819 5.09%	$6,630,862 3.68%	$8,690,278 4.61%

Sources: Lawrence Public Schools, "Fiscal Year 2016 Proposed Budget" (2015), available at http://www.lawrence.k12.ma.us/users/0files/LPS/BudgetAndFinance/files/20150518_FY2016_Budget_Book_vF.pdf; Lawrence Public Schools, "Fiscal Year 2015 Proposed Budget" (2014), available at http://www.lawrence.k12.ma.us/images/lpstv/LPS/Budget&Finances/budget.pdf. Fiscal year 2013 detailed budget data available upon request to Lawrence Public Schools.

Lessons learned: Implement school-level budgeting and strategically reallocate funds based on student needs

School-level budgeting was integral in two ways. First, it ensured that school leaders were able to fill teaching positions that best fit student needs. Second, it allowed school leaders to tailor implemented practices to their particular school. Districts also found ways to provide more funding directly to schools through the reallocation of funds through targeted actions such as reducing central office staff. For instance, when LPS scrutinized its budget, the district determined that it could comb through non-salary items and cut its central office staff by one-third in order to provide more money to the schools themselves. Also in the Lawrence district, the principal of Guilmette Elementary School identified areas of growth for teachers and used school-level budgeting to reallocate funds to invest in teacher stipends, create a data team, and finance instructional technology.

Aggressive recruiting, hiring, and training to achieve excellence in teaching and leadership

Anyone who has worked in a district or school will not be surprised that recruiting and training highly effective teachers and school leaders was the most frequently cited barrier that Houston Independent School District, Denver Public Schools, and Lawrence Public Schools district leaders had to overcome in undertaking school improvement initiatives. Roland Fryer asserted that HISD's most significant implementation obstacle was finding the "human capital that wants to go into inner city schools in Houston and is effective."[70] This human capital challenge is widespread with many superintendents across the country facing similar barriers to large-scale school improvement.

Finding and training talented individuals is an obstacle along the entire human-capital continuum—from superintendents to teachers. Once superintendents select school leaders, principals are then faced with the challenge of creating a strong teacher talent pipeline. To achieve excellence in teaching and leadership, HISD, DPS, and LPS employed many similar tactics but there were also key differentiating components for individual school and district talent pipelines. Through concerted efforts, all three districts were able to use aggressive recruiting, hiring, and training techniques to find talented individuals that would excel in their underperforming schools. This section identifies the strategies each district pursued to secure strong principal leadership and to develop or recruit exemplary teachers.

Securing excellent principal leadership

Hiring effective principals in Apollo 20 program schools became one of Terry Grier and Roland Fryer's top priorities. Houston Independent School District replaced 95 percent of its school leaders in Apollo 20 program schools, including the removal of all secondary school principals.[71] However, finding effective new leaders was no easy feat. Fryer and Grier interviewed 150 applicants in order to fill just nine secondary school leadership positions.[72] They assessed school leader

candidates on their resilience, grit, and whether or not the candidate's opinion of excellent teaching aligned with theirs. Fryer asserted that, "If we walk into a classroom together and you say, 'That looks excellent,' and I say, 'That looks terrible,' it will be hard to work together."[73]

The principal interview process not only involved a data task, but also a classroom walkthrough where the candidate provided feedback based on classroom observations. Once the district selected its principal hires, Apollo 20 leaders received extensive training that included visits to high-performing charter schools, EdLabs training sessions and workshops, and instruction from IDEA Public Charter Schools on the five best practices of high-performing charter schools along with the use of metrics to measure the effectiveness of implementation.[74]

In Denver, the school district and the Blueprint Schools Network worked together to fill 90 percent of the school leadership positions in the Denver Summit Schools Network.[75] Blueprint created an interview guide for the selection process, and the hiring was extremely hands-on with Fryer and Superintendent Tom Boasberg providing their input on candidates. Denver Public Schools also incentivized talented leaders—both inside and outside the district—to fill principal positions through increased compensation. While some new school leaders were already working in DPS schools, others came with school turnaround experience from outside of Colorado. In addition, DPS grew its own leadership talent pipeline within Denver Summit Schools Network schools by promoting assistant principals who exceeded expectations to oversee some DSSN schools.[76] Following the hiring process, DPS trained the vast majority of principals using practices from Uncommon Schools—a high-performing network of charter schools with impressive academic achievement results.[77]

Lawrence Public Schools, meanwhile, pursued a different approach to secure strong principal leadership. Instead of doing a clean sweep and replacing almost all of its school leaders, LPS initially supplanted only 35 percent of its principals and later replaced another 20 percent of school leaders.[78] Julie Swerdlow Albino, LPS's chief redesign officer, explained that the district highlighted the importance of the so-called skill-will matrix during the hiring process for new teachers.[79] The skill component involves hiring principals who fully understand what constitutes excellent instruction, have a demonstrated ability to be instructional leaders, and can secure stakeholder investment and ensure that teachers are committed to bringing about change, she explained. The will component of the matrix entails finding school leaders who are "willing to work hard and roll up their sleeves,"

continued Albino.[80] LPS's principal pipeline is a hybrid of internal promotions, recruiting exemplary school leaders from the nearby Boston area, and grooming aspiring leaders through an Academic Fellows program where future leaders fill internship positions. LPS credits the success in bringing talented leaders to the district to being able to offer principals increased autonomy and competitive salaries, and being able to pull from a large pool of talented leaders thanks to the district's proximity to the Boston area.[81]

Recruiting, developing, and retaining a strong teacher pipeline

Excellent teachers can substantially affect student achievement.[82] Effectively filling teaching positions therefore became a crucial step in the school improvement process across all three districts. However, Houston Independent School District, Denver Public Schools, and Lawrence Public Schools pursued different approaches in establishing exemplary teacher-talent pipelines.

In HISD, elementary and secondary school teachers participated in what were termed commitment conversations with HISD's central office and staff from TNTP, formerly The New Teacher Project. Interviewers then scored these conversations and paired the results with teachers' value-added data and former evaluations.[83] Ultimately, almost half of secondary school teachers were replaced, but the district chose to keep most elementary school teachers.[84]

The interview questions below were part of the conversation protocol for HISD Apollo 20 teaching position interviews. Interviewers used the conversation protocol to rate teacher applicants based on their responses to each question. The protocol document also contains so-called positive indicators and negative indicators that correspond to the individual questions. These indicators helped interviewers interpret and categorize responses.

1. As you know, many of the students at this school are considered "at risk." For the purpose of this question, we're using the term "at risk" to mean one or more grade levels behind in basic skills. What do you think causes a student to be at risk?

2. Knowing this student population, do you believe these changes will positively impact student achievement and allow you to meet the goal that 100 percent of students be on grade-level in the subject area you teach? Why or why not?

3. Based on your experience, what else can be done to meet this goal?

4. How do you hope to contribute to meeting these expectations?

5. We'd like you to start by telling us about the variation in performance levels within one of your classes at the beginning of the year. What were the goals for this year?

6. How did you track progress towards these goals?

7. How did you define success for [pick one goal]?

8. Tell us about a student who failed to complete a project or paper. Why did this student not complete his/her work?

9. How did you respond to this student? (What did you do next?) [Note to facilitator: Probe for evidence of differentiation]

10. In general, what are three factors that you think contribute to students' lack of motivation?

11. As a teacher, which of these factors are you able to impact?

12. Before you get back to class, we'd like to pick your brain because you have a ton of experience at this school. If you were in charge of turning this school around, who would be the five teachers that you would need in order to raise student achievement?

To strengthen its teaching workforce HISD employed a combination of leveraging existing teacher talent paired with recruiting high-quality teachers. The secondary teachers hired received sign-on bonuses, while all Apollo 20 program secondary school teachers were provided extended contracts and generous compensation and benefits packages. All HISD Apollo 20 teachers also underwent extensive Teach Like a Champion training based on Uncommon Schools' instructional practices.[85] The HISD Apollo 20 elementary school leaders interviewed for this report emphasized their devotion to developing relationships with existing teachers and training those teachers to effectively implement high-performing charter school practices. Francisco Penning, former principal of Scarborough Elementary, said that he "groomed and developed teachers to get them where they needed to be."[86] While Ken Davis, a former principal of Dowling Middle School took a different approach and used advertisements, the allure of repainted school facilities, and later the school's successful track record to attract talented teachers. In addition, Davis mentioned, "Highlighting our successes attracted other teachers and then teachers did more of the recruitment."[87]

Similar to the hiring process at the secondary level in HISD, DPS required all DSSN teachers to reapply for their positions. DPS achieved excellence in teaching by employing the following strategies:

- Creating a homegrown talent pipeline
- Implementing an intensive hiring process
- Developing coaching programs
- Providing teachers with a stipend for extra time in the classroom
- Increasing teacher salaries

The homegrown talent pipeline consists of hiring student teachers and promoting them to full-time classroom teaching positions—which is similar to DPS's homegrown leadership pipeline where Denver Summit Schools Network assistant principals assume school leader positions. The district conducts a rigorous and intensive teacher hiring process, as exemplified by the four-hour interviews that Trina Jones, principal of DPS's Green Valley Elementary School, holds with candidates. Jones requires teaching applicants to analyze data, participate in collaborative conversations, teach a recorded lesson and provide a follow-up evaluation of the lesson, and interview with various staff members.[88] Principal Jones noted that the hiring process is "very intensive … 12 to 15 applicants screened were competing for one position."[89]

Hiring talented teachers: The approach of McGlone Elementary School

Denver Summit Schools Network's McGlone Elementary has strengthened its teacher pipeline through an intensive hiring process. The school first screens candidates through a phone interview. Promising applicants are next invited to the school for an in-person interview with a hiring team, which includes current teachers and teacher leaders.

According to Suzanne Morey, former principal of McGlone Elementary, the essential characteristics that she wanted in new teacher hires were the following: intelligence, resilience, the ability to effectively work with the school's demographics, and an understanding of excellence in best practice and planning. She said the same standards remain in place today.[90]

Teaching candidates are also required to teach a lesson and submit a lesson plan. During the lesson, interviewers focus on instruction and rigor as well as how applicants connect with students. Applicants also share an artifact that displays how they previously used student achievement data to progress monitor or differentiate instruction. Alternatively, new teachers provide information on how they would use student-achievement data for either purpose.[91]

Once candidates are hired and they become new teachers, the DSSN works to improve classroom teaching through instructional coaching programs. McGlone Elementary established professional learning communities that are led by an instructional leader and meet several times a week. The school also ensures that every teacher receives one-on-one coaching once a week. These coaching sessions involve reviewing data, analyzing students' work, and building upon teachers' understanding of Common Core standards.

The Lawrence Public Schools, in contrast to the Houston and Denver districts, retained more than 90 percent of its teachers. The district had the option of replacing all staff in the school system, but Jeffrey Riley, LPS superintendent, said that the district had "a lot of good teachers, but there was room for them to grow."[92] Riley also believed that retaining teachers meant those teachers would most likely be more committed to the district and to creating a sustained school culture.[93] According to Julie Swerdlow Albino, LPS's chief redesign officer, "These are people who want to be here for a long time. … If you can get people that are building sustained school culture and want to be here for a while, that is like the holy grail."[94]

In order to ensure teachers were engaged in the turnaround effort, LPS assembled a Superintendent's Teacher Leader Cabinet to advise the district on the implementation of its school improvement practices. Schools also created teacher leadership positions in order to cultivate talent. For example, Guilmette Elementary established so-called content lead positions where exemplary teachers provide mentorship and instructional feedback to their fellow teachers. LPS is unique in that the district attracts both reform-minded and traditional teachers through its union benefits and pension system coupled with teacher leadership positions and the autonomous nature of its schools. The union benefits establish parameters around working conditions and scheduling, while teachers are also able to climb a career ladder and receive increased compensation.[95]

Lessons learned: Aggressively recruit, hire, and train school leaders and teachers

Districts and external partners recruited, hired, and trained innovative school leaders who would be best capable of using their autonomy to effectively infuse high-performing charter school practices. In Lawrence, the district leveraged its proximity to Boston and the promise of a decentralized school district to recruit strong principals.[96] In Denver, the district developed teacher leaders and assistant principals to create a principal pipeline that tapped the best in-district talent.[97]

Once hired, school leaders in all three districts recruited teachers who were resilient, hardworking, able to work with diverse populations, well-versed in high-quality instruction, and maintained high expectations for students. Karen Powell, who was then the secondary school principal of Collegiate Prep in Denver, flew to Arizona to interview Teach For America candidates for 10 open teaching positions at her school.[98] At Denver's Green Valley Elementary, then-Principal Keith Mills implemented an intensive teacher hiring process that included a four-hour interview, data analysis, collaborative conversations, and a recorded practice teaching lesson.

Ensuring excellence in teaching and leadership entailed a variety of approaches across schools and districts. In addition to the previous examples, districts and schools maximized existing teacher talent with comprehensive training and coaching and created homegrown talent pipelines through internships and internal promotions. Districts and schools also provided salary incentives to attract and retain high-quality teachers and leaders.

Securing stakeholder investment

Districts and school leaders recognized that they urgently needed community partners and stakeholder buy-in in order to successfully implement high-performing charter school practices. "When you treat people with dignity and respect and take time to have conversations then things go smoother," said Roland Fryer.[100] The authors explored how Houston Independent School District, Denver Public Schools, and Lawrence Public Schools were able to secure investment from key stakeholders despite varying degrees of initial resistance. While districts and school leaders used a variety of communication strategies to secure buy-in, the power of data and word-of-mouth proved the most effective.

"True change only happens when you do things with people not to people. I had to convince people that I wanted to 'do this with you' and that 'I can't do it without you'. Teachers, parents, the teachers' union, the community, and the chamber of commerce all played a huge role in the gains we see today and that wouldn't have happened if they didn't jump in and help. Everyone gave up their little piece of the pie and focused on what matters: kids."

—Jeffrey Riley, superintendent of Lawrence Public Schools[99]

School board engagement

Houston Independent School District brought its complete Apollo 20 program plan to the Houston Board of Education, including information detailing how the district planned to fund the program. During the first presentation to the board, trustees were able to hear about the plan, ask questions, propose changes, and make recommendations. Following the presentation, the district revised its plan and presented to the public for review three days before the scheduled board vote on the measure. Prior to the vote, HISD presented the final plan to the board one more time.[101] The board voted 8-0 to implement the Apollo 20 program in secondary schools. However, the board was not nearly as unified when it came expanding the program to elementary schools. The final vote favored the expansion by a narrow margin of 5-4.[102] The vote to expand the Apollo 20 program to elementary schools was closer in part because elementary schools were not facing the threat of state takeover.[103]

Nate Easley—the board member who represents Denver Public Schools' Far Northeast community where the Denver Summit Schools Network is located—played a prominent role in the planning process around the creation of the DSSN. Easley engaged in conversations with the Blueprint Schools Network and helped

convince his fellow board members that forming the DSSN would increase student achievement results.[104] Happy Haynes, president of the DPS Board of Education, explained that at the time of the vote, the Board was divided into two distinct factions: those who supported charter schools and their reforms and those who were skeptical of them. Despite the divide, DPS prevailed in securing votes needed for the district to move forward with forming the DSSN and implementing high-performing charter school practices.[105]

Union engagement

The extent to which each district engaged its local union in the school turnaround process varied. While the Denver Classroom Teachers Association, which represents Denver's nearly 3,000 teachers, was not the final decision maker in Denver Public Schools' school improvement plan, DPS did consult with the union during the planning process.[106] In the Houston Independent School District, the Houston Federation of Teachers, or HFT, said that HISD consulted them about parts of the Apollo 20 program during monthly meetings held prior to board meetings. Yet, the HFT believed that the district failed to fully engage the union until after the planning was well underway.[107]

Lawrence Public Schools prioritized working with the union during its district turnaround. As Superintendent Riley stated, "I had to convince people that I wanted to 'do this with you' and that 'I can't do it without you.'"[108] Because LPS was under state receivership the district was allowed to forgo collective bargaining if it so desired. However, LPS elected to work closely with the union to reach a collective bargaining agreement and after more than a year of negotiations finalized the pact. The agreed upon contract terms included the creation of teacher leadership teams, the opportunity to significantly raise teacher salaries, and increased school-level autonomy around structuring the school day and establishing working conditions.[109]

Teacher engagement

Securing teacher investment was imperative because, as Lawrence Public Schools Superintendent Riley, said, "teachers are the most important people in the whole state of Massachusetts. … You've got to make them feel like what they do every day is super important."[111] Teachers were originally hesitant to embrace the initiatives, given all the associated changes—such as new leadership and the increased time commitment—however, teacher investment in school improvement initiatives markedly increased over time.

Denver Public Schools and Lawrence Public Schools both used teacher voice to bring teachers on board with the implementation of new practices. For example, schools in the Denver Summit Schools Network created instructional leadership teams and teacher leadership positions to provide teachers with increased responsibility and ease concerns about instituting high-performing charter school practices. Similarly, LPS obtained teacher investment through multiple efforts, including implementing teacher leadership positions and by designing a superintendent's Teacher Leader Cabinet to advise the district on the implementation process. According to LPS's Julie Swerdlow Albino with: "We wanted to signal to teachers that we want to do this work with them and not against them."[112]

Houston Independent School District teachers also grew more supportive of school improvement initiatives as relationships developed. With time, teachers came to understand the positive effect these evidence-based practices could have on student achievement. The HISD Apollo 20 elementary school leaders, who kept almost all of their existing teachers, emphasized the importance of building rapport with teachers to secure their buy-in. According to the principals, they were careful to fully explain to teachers the reasons why HISD decided to infuse these specific practices into Apollo 20 elementary schools. Susan Shenker, former principal of Walnut Bend Elementary, said, "If the school was going to move forward, it would happen through the existing staff who had connections to the wider community."[113]

While HISD elementary school leaders needed to build trust with their staffs before teachers embraced the implementation of new practices, secondary school leaders confronted the obstacle of bridging the gap between old and new teachers. This divide existed due to the large influx of new teachers who came with the reconstituting of the Apollo 20 secondary schools. Ken Davis, former principal

"Teachers were resistant at first. We shared those ideas and plans and slowly they started to come on board. They knew it was good for our kids. There was no question that it would benefit our kids. That stayed at the center. There's a tendency to think about adults before thinking about the kids. … Adults were on board and those that couldn't handle it left."

—Lori Butterfield, principal, Guilmette Elementary School, Lawrence Public Schools[110]

of Dowling Middle School, noted that he was ultimately able to bring teachers on board by appealing to their sense of commitment to students and need for collaboration. He explained that their school needed to serve as "a model [for other schools] … and that this work was too big for any [one] of us [to do alone]." [114]

Securing teacher buy-in: Scarborough Elementary

The Houston Independent School District's Scarborough Elementary School retained almost all of its teachers during the launch of the Apollo 20 program. Francisco Penning, who was then the school's principal, faced the challenge of building relationships with an entrenched teacher workforce while assuming a new leadership position and implementing best practices. Penning recounted that there were obvious trust issues when he first became principal and that teachers initially resisted implementing high-performing charter school practices. However, Penning stressed to teachers that his number one priority was ensuring that the school prepared its students for college. Penning said that, once teachers understood that he was there to improve educational outcomes for students, the teachers came around to supporting the practices.[115]

To make the implementation process smoother, Penning made it a point to set aside the time necessary to groom and support teachers as they acclimated to the culture of high expectations.[116]

Parent engagement

Parents expressed an array of responses to the new practices that were implemented in their children's schools. Parents, like other stakeholders, were overall much more inclined to embrace these practices once student achievement data became available.[117] These data allowed parents to accept the efficacy of school improvement plans. Parents also came around to the promise of high-performing charter school practices after hearing from school leaders and other parents that these practices were an effective means of improving their children's education.[118]

In Lawrence Public Schools, parents were quick to embrace the turnaround plan. The vast majority of parents are Hispanic and moved to Lawrence with the hope of providing their children with a world-class education. However, LPS schools were in a dismal state prior to the turnaround and had underserved students for

years. After observing noticeable changes such as increased enrichment opportunities, improved facilities, and more engaged teachers, parents understood the potential of LPS's school improvement initiative. The district also opened a community resource center, which familiarizes parents with the material that teachers cover in classrooms. Julie Swerdlow Albino noted that, "parents sacrificed a ton to get kids here. … They may not have understood all nuances of the school system, but they embraced many elements of the plan."[119]

Parents in the Houston Independent School District initially had mixed reactions to the district's turnaround effort. While some parents supported the turnaround plan, others worried that teacher diversity would decrease with the implementation of these practices. A number of affluent parents whose children attended non-Apollo 20 program schools also questioned the district's decision to increase funding for underperforming schools.[120] Terry Grier overcame their resistance by thoroughly explaining what the additional funding was being used for in low-performing schools.

Former Scarborough Elementary School Principal Penning, explained that he was able to combat initial parental resistance through conversations with parents about how the new practices would prepare students for college and allow them to achieve at grade level. He also invited parents to attend math and literacy nights at the school, which focused on material that the students were learning in the classroom. As a result of Penning's parent engagement efforts, parents came to understand the value of implementing high-performing charter school practices.[121]

In Denver Public Schools, the major source of parent resistance was the plan to close Montbello High School—one of Denver's oldest high schools—and replace it with three specialized high schools: High Tech Early College, Collegiate Prep Academy, and the Denver Center for International Studies. Karen Powell, former principal of Collegiate Prep Academy worked with the district's parent liaison to ease parental dissatisfaction. She recalled that she and other school officials stood outside of stores, attended countless civic events, and frequented church gatherings in order to relay the message that Collegiate Prep and the other two planned high schools would improve outcomes for their children. Powell noted that these targeted parent communication efforts "eased some of those anxieties" around the opening of the specialized high schools.[122]

In contrast to the Montbello experience, parents whose students attended the two Denver Summit Schools Network elementary schools included in CAP's study embraced the implementation of high-performing charter school practices. Many parents were excited right off the bat by the possibilities of the school improvement initiatives; their support only increasing over time as they saw evidence of student achievement gains, updated school facilities, and the addition of more afterschool programs.

Community engagement

The three districts included in this report employed a number of tactics to achieve community investment in implementing the new practices. While each district faced a certain amount of community resistance, Denver Public Schools had the unique challenge of easing tensions around closing Montbello High School, which was beloved by the community. As noted above, Montbello was a community icon—despite the fact that the school had been failing children for years and only 6 out of every 100 of its freshmen attended college without remediation.[123] Still the idea of closing the historical high school evoked strong emotional responses with a wide swath of residents in Denver's Far Northeast neighborhood. According to Trina Jones, principal of Green Valley Elementary, "The community felt that the district took away their cultural center and everything that brought them tighter as a community."[124]

DPS lessened resistance to the Denver Summit Schools Network plan by shifting the community's focus on the past to the potential of the future. The district hired people to meet with groups of community members on a regular basis to hear concerns and answer questions about the turnaround of DSSN schools.[125] DPS also recognized the value of targeting feeder pattern schools where parents were concerned about their children's academic futures.[126] In addition, there was a core group of community members who fully supported the implementation of high-performing charter school practices. This core group met with numerous church congregations to communicate the message that these practices were promising methods to raise student achievement.

While the Houston Independent School District and Lawrence Public Schools faced considerably less resistance than the Denver schools, these districts still had to focus heavily on securing community buy-in. Terry Grier and Roland Fryer prioritized community investment and devoted a substantial amount of time to

relaying the promise of the Apollo 20 program. Grier, Fryer, and HISD school leaders organized breakfasts with ministers, used initial student achievement data to provide evidence that these practices are effective, and hosted meetings in living rooms that focused on the necessity of the Apollo 20 program. Grier noted: "We just kept hitting people over the bridge of the nose with the facts. We would show the attendance rates and graduation rates. All four high schools had all seniors apply to and get accepted into colleges."[127]

Similar to HISD, LPS was able to increase stakeholder investment following the release of student achievement data. The district also brought more community members on board with its turnaround plan through the opening of its community resource center.

The community surrounding Houston Independent School District's Walnut Bend Elementary School was perplexed and upset by the school's Apollo 20 designation because they were unaware Walnut Bend was underperforming. Susan Shenker, former principal of Walnut Bend, recalled feeling that she was "walking into smoking ruins" when she assumed her leadership position. Shenker understood that she needed to explain the impetus behind the Apollo 20 label to the community and chose to employ data to convey the school's state of student achievement pre-turnaround. Her overarching message was that implementing high-performing charter school practices presented the school with a chance to alter its current downward trajectory and provide students with a superior education.

Shenker ultimately prevailed in developing relationships with community members. Moreover, a few community members became cheerleaders for implementing the evidence-based practices. Through relationship building, student achievement data, and word-of-mouth outreach, the community came around to supporting the turnaround effort. As a result, Walnut Bend was able to shed its former reputation as an underperforming school. In 2010, Walnut Bend's proficiency rate was 9 percentage points below the state's average in reading and 7 percentage points below the state's average proficiency rate in math. Four years later, Walnut Bend outperformed the state's average proficiency rate by 3 percentage points in reading and was only 1 percentage point below the state's average proficiency rate in math.[128]

Lessons learned: Data and word-of-mouth are powerful tools for stakeholder investment

Student-achievement data and word-of-mouth proved to be the most influential tactics to convince an array of stakeholders that implementing high-performing charter school practices is an effective school improvement strategy. District and school leaders quickly learned that overcoming resistance to implementing comprehensive reforms from parents, teachers, and the community was easier with the support of data that showed increases in student achievement. Districts and school leaders were able to use data to reinforce the reasoning behind these school improvement approaches. Likewise, word-of-mouth is a key form of communications that can garner support for the implementation of new, innovative practices.[129]

According to Jeffrey Riley, superintendent of Lawrence Public Schools, community buy-in was achieved in large part through "parents talking at baseball games and seeing that test scores are up, buildings are being fixed, and enrichment programs are more widely available for their kids."[130] In addition to student achievement data and word-of-mouth, districts and school leaders also used other communications strategies such as attending church events, holding community meetings, and hosting parent forums to share information and obtain stakeholder investment.

Widespread adoption of high-performing charter school practices

Today, the practices of high-performing charter schools have been adopted thoroughly by the schools in HISD's Apollo 20 program and the Denver Summit Schools Network. In fact, the practices spread throughout both the Houston Independent School District and Denver Public Schools following the creation of the Apollo 20 program and Denver Summit Schools Network. Many HISD schools are embracing data-driven instruction, tutoring, and high-quality leadership training. There is evidence that data-driven instruction is a universal practice in the HISD. In fact Grier recently mentioned that if "you go into every school in Houston, you'll see data charts on the walls."[131] Furthermore, there is a new turnaround initiative underway in seven additional HISD schools that implements practices that are reflective of the Apollo 20 program. The schools are located in HISD's North Forest community. These schools were formerly a separate school district, but HISD annexed the chronically underperforming North Forest school district in 2013.[132] As part of the turnaround plan for these seven schools, HISD replaced all teachers, administrators, and school leaders. HISD employed a $10,000 bonus incentive to recruit talented school leaders. New school leaders also were able to bring 10 percent of their former teachers with them to their respective turnaround schools.[133]

Like HISD, DPS embraced both data-driven instruction as well as tutoring. The district passed a $15.5 million levy for instructional purposes in order to enact the districtwide tutoring program.[134] DPS is also providing schools with increased flexibility around curricula selection and professional development. The 2015-16 school year marks the first phase of the district's decentralization plan. All DPS school leaders have the option to choose their own curricula and select a professional development program that is best suited for their particular school's faculty.[135] Following the announcement of DPS's flexibility plan, almost 20 percent of school leaders opted to choose their own curricula or professional development program.[136]

As districts such as HISD, DPS, and LPS provide increased flexibility for their school leaders and adopt new practices, it is becoming clear that traditional public schools are embracing elements that were once only associated with high-performing charter schools. The fact that many of these practices spread throughout Houston and Denver school districts affirms that both districts recognize the potential of this new approach in significantly improving student achievement.

Lessons learned: High-performing charter school practices spread throughout districts

High-performing charter school practices are gaining momentum in traditional public schools. Houston now has data charts on the walls of every school, the district is replicating Apollo 20 leadership training in numerous other schools, and schools throughout the district use intensive tutoring programs.

Similarly, Denver Public Schools has implemented a high-dosage tutoring program across the district, provides increased flexibility to schools in determining the structure of the school day and curriculum, and places a high value on data-driven instruction. With the spread of these best practices, it is apparent that high-performing charter school practices are not limited to charter schools and only a subset of schools within Houston, Denver, or Lawrence. Meanwhile, Fryer continues to search for new partners to take on this crucial work. He urges other traditional public school districts to keep in mind that "poverty is not destiny," and just as importantly, "we have a proof of concept."[137]

Recommendations

The remarkable student-achievement gains experienced in the Houston Independent School District, Denver Public Schools, and Lawrence Public Schools provides evidence that high-performing charter school practices are effective in low-performing, traditional public schools. As many states and districts determine how to adhere to the school improvement requirements under the Every Student Succeeds Act, states and districts should seriously consider implementing high-performing charter school practices as an evidence-based school improvement strategy. CAP recommend the following steps to improve low-performing schools based on key findings and analysis of interview data.

States should use the new 7 percent set-aside fund under Title I, Part A of ESSA to implement a targeted strategy focused on a subset of the lowest-performing schools

ESSA requires states to set aside 7 percent of Title I, Part A funding for school improvement purposes. Spreading the money among all the schools identified as low-performing in a district will not yield enough funding per school to significantly support aggressive improvement strategies. Instead, states should employ a targeted strategy, such as a sequencing approach that begins with schools facing similar challenges or those that are geographically close to each other.

Districts should give leaders of schools identified for improvement greater autonomy over school budgets and spending

As districts create school improvement plans for low-performing schools under ESSA, districts should provide school leaders with autonomy to craft school budgets and spend funds based on their school's needs. High-performing charter school leaders have much more financial freedom to determine how to spend

funds within their school budgets. Typically, charter schools can decide how much funding to allocate toward specific resources.[138] However, many traditional public school leaders are bound to their district's budget decisions with little discretion over spending funds within their school budgets.[139]

The Houston Independent School District, Denver Public Schools, and Lawrence Public Schools all approached budgeting similar to high-performing charter schools. School leaders had the flexibility to repurpose funds to benefit their student populations. For example, school-level budgeting allowed Lori Butterfield, the principal of an LPS elementary school, to decide how to spend funds that were allocated to her school; she targeted funds toward instructional technology, teacher stipends, teacher leadership positions, and a data team.[140] These budget decisions enhanced the school's focus on data-driven instruction and helped improve student achievement, according to Butterfield.

Districts should give school leaders hiring autonomy

ESSA requires districts to create school improvement plans for the lowest-performing schools, schools that fail to graduate one-third or more of their students, and schools with chronically low-performing subgroups. In creating these improvement plans, districts should provide school leaders with hiring autonomy over their teaching staff.

When asked about the most important turnaround component, Julie Swerdlow Albino, chief redesign officer for Lawrence Public Schools, said, "It's critical to have a team that's aligned with the overall vision of the school, and is ready to use new flexibilities to push for constant improvement."[141] During the teacher hiring process, high-performing charter schools seek mutual consent from both the school leader and teacher. Mutual consent provides school leaders with the autonomy to screen and select their own teaching staff. At the same time, charter-school teachers have the opportunity to decide where to apply. This mutual consent between charter-school leaders and teachers allows school leaders to cultivate teams that voluntarily opt into the school's vision, mission, culture, and management style.[142] While principals of targeted low-performing schools in the three districts examined in this report—Houston, Denver, and Lawrence—implemented school-level hiring practices, for many public schools, districts' central offices decide which teachers to hire and where to place those teachers.[143]

It is imperative that districts allow school leaders to use the recruitment and hiring processes employed by high-performing charter schools. These practices include screening applicants for their resilience, work ethic, high expectations for students, impact on student learning and past achievement, and leadership. School leaders should analyze prospective teachers' prior student achievement data. These data should include growth scores, the percent of proficient students, and positive trends in improving student outcomes in the applicant's previous classes. The outcome measures will provide an accurate representation of the applicant's ability to increase student learning. In addition, school leaders should ask probing questions about applicants' perspectives on their ability to drive better outcomes for low-income students. Applicants should also be required to teach a sample lesson. Finally, districts should move their hiring earlier in the school calendar in order to increase the pool of teachers.[144]

Districts should implement intensive leadership and teacher training programs that resemble professional development provided to high-performing charter school leaders and teachers

The Houston Apollo 20 program employed high-performing charter school leadership and teacher training programs. High-performing charter schools' leadership training programs tend to differ from professional development in most public schools in that they train principals to be sophisticated consumers of data and to use data analysis to improve instruction; teach school leaders how to perform observations and provide actionable feedback; and help principals learn how to tackle administrative concerns, such as managing budgets and student enrollment.[145] In contrast, the National Center for Education Statistics found that the majority of public school leaders do not participate in leadership training programs on par with those provided to principals in high-performing charter schools.

Overall, lecture style workshops are the most prevalent professional development training offered to public school leaders. Furthermore, only slightly more than 50 percent of school principals participated in job-embedded mentoring and coaching as part of their professional development.[146]

In Houston's Apollo 20 program schools, principal professional development mirrored training provided to high-performing charter school leaders. Principals met regularly with their school improvement officer to review assessment data and share best practices.[147] School improvement officers also conducted school visits.

These visits included observing instruction and meeting with principals individually to discuss administrative matters.[148] Principals also participated in a leadership development conference in New York where they visited high-performing charter schools, created comprehensive school improvement plans, and discussed best practices in relation to the five school improvement strategies.[149] Finally, principals attended a leadership development conference in Houston where leaders split into teams based on clear strengths and presented best practices for one of the five evidence-based school improvement strategies.[150]

Similarly, school leaders should implement ongoing training and coaching programs for teachers. These training and coaching programs should reflect the training provided to high-performing charter school teachers. Typically, teacher professional development is unrelated to the everyday practice of teaching, disconnected from the actual curriculum used in classrooms, and occurs infrequently in the form of standalone events or workshops conducted by outside consultants.[151] Many school districts even mandate how schools spend professional development funding so that it is often spent on activities that are not tailored to meet the needs of schools.[152] However, professional development for teachers in high-performing charter schools entails the following: frequent observations and subsequent formal and informal feedback; individualized coaching; and training focused on data analysis as well as a particular grade level's curriculum and assessments. For example, Suzanne Morey, former principal at DPS's McGlone Elementary School, hired part-time teachers as coaches who worked individually with every teacher once a week. Teachers and their coaches reviewed student work and data, and coaches observed teachers on a weekly basis.

High-performing charter schools are able to customize professional development to fit the needs of their teachers.[153] While many traditional district schools are constrained by their district's professional development requirements and budget line items, high-performing charter schools have the autonomy to employ professional development activities that are best for an individual school's culture.[154]

Flexibility with scheduling and extended learning time are also integral to the success of professional development activities in charter schools. An extended school day provides teachers with time for collaborative lesson planning during school hours.[155] In fact, a number of high-performing charter school networks assert that their success is due in large part to providing teachers with collaborative planning time.[156] Many charter schools also arrange their schedules in a manner that

permits teachers to specialize in a particular subject area. Charter school schedules structured around individualized student learning afford teachers with time to specialize since paraprofessionals or tutors may oversee student learning in small groups or digital labs.[157]

District leaders should plan and conduct town halls, church events, and meetings with parents and stakeholders to secure community investment—buy-in—early in the turnaround process

A primary focus from the onset of the school improvement planning phase should be devoting time and resources to developing an effective communications plan for maximizing community investment, or buy-in. Community members need to understand the impetus behind implementing these practices, and there are a wide variety of avenues that district leaders can pursue to communicate relevant information to communities. These communications options include town halls, attending church and civic events, and hosting meetings for parents. While school leaders and districts may choose different strategies for securing stakeholder investment, developing a cohesive communications strategy must be a key priority from the start of the planning process.

Conclusion

District and school leaders are constantly grappling with effective approaches to raise student achievement. Yet, what sets the Houston Independent School District, the Denver Public Schools, and the Lawrence Public School District apart is that each tackled this challenge by pursuing a new, innovative and systematic approach to improve low-performing schools.

Turning around low-performing schools is no easy task. District and school leaders must confront difficult decisions about staffing, the budget, and other priorities. In order to improve achievement for all students, districts need a comprehensive approach that addresses the problem as a whole, rather than tinkering around the margins. Put simply, implementing a single practice, such as an extended school day, will not address the problem of underperformance in its entirety and is much less likely to result in dramatic student achievement gains. In response to the question of whether there was one individual component of his district's turnaround plan that had the largest impact, LPS Superintendent Jeffrey Riley put it best: "They're all equally important. You can't do one without the other."[158] The collective implementation of the practices—coupled with a strong, external partner—enabled these districts to experience significant gains in student achievement within a short period of time.

This report adds to a body of research that suggests that the implementation of high-performing charter school practices is an evidence-based approach to realizing significant student achievement gains in traditional public schools. The Every Student Succeeds Act presents an ideal opportunity for other states and districts to benefit from lessons learned in HISD, DPS, and LPS. As districts move forward with crafting school improvement plans under ESSA, they would be remiss to not seriously consider the implementation of high-performing charter school practices as a school improvement activity.

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