ERS

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Igniting the Learning Engine

How school systems accelerate teacher effectiveness and student growth through Connected Professional Learning

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Duval County Public Schools | DC Public Schools | Sanger Unified School District | Achievement First

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Contents

Executive Summary

THE CHALLENGE

For decades, education leaders have struggled to improve the quality of teacher professional development (PD) and its impact on student learning. Even in school systems that have adopted promising practices such as coaching and mentorship, peer assistance and review, and professional learning communities (PLCs), teacher PD does not seem to have significantly improved teacher effectiveness or student achievement.[1]

Now, more rigorous College- and Career-Ready Standards (CCRS) profoundly raise the bar for teaching and learning in American school systems. To help students reach this new bar, teachers must radically improve student learning *and* grow as professionals, often teaching more complex content than anything they have experienced before. In a CCRS world, it is more urgent than ever to make PD work.

PROMISING PRACTICES IN FOUR SCHOOL SYSTEMS

But some school systems are rising to the challenge and significantly improving instruction and seeing student learning growth. With the support of the Bill & Melinda Gates Foundation, we at Education Resource Strategies sought to understand not just *what* is happening in these systems, but *how* leaders have reorganized resources—including people, time, and money—to make it happen.

We identified four systems where instruction and student performance are improving even under more rigorous academic standards, where teachers are serving a relatively high-needs student population (e.g., at least 64 percent of students receive federal free or reduced-price lunch benefits), and where system leaders highlighted *redesigned professional learning* as a key driver of growth. These systems—District of Columbia Public Schools, Duval County Public Schools, Sanger Unified School District, and the charter management organization Achievement First—represent a range of sizes, regions, funding levels, and system types, enabling us to identify insights that we hope can be applied across the country.

IGNITING THE LEARNING ENGINE

When we took a close look at these case study systems, we found that the core elements of their professional learning look a lot like research-based strategies that some school districts have pursued for years. The difference is in how these system leaders have connected the daily work of improving instruction to teachers' ongoing professional learning.

In many school systems today, teacher PD remains disconnected from everyday instructional work —disconnected from the particular material being taught, from the collaborative work of teacher planning time, and from observations by peers, mentors, and school leaders. In contrast, professional learning in the systems we studied is profoundly connected—really, embedded—into the teaching job, and teachers learn and grow through the daily work of improving instruction. We call that approach "Connected Professional Learning" and found that it was built on the following elements:

- **Rigorous, comprehensive curricula and assessments:** Ensure that all schools have access to rigorous and coherent curricula, assessments, and other instructional resources, aligned to College- and Career-Ready Standards
- **Content-focused, expert-led collaboration:** Organize teachers into teams, led by content experts, that have the time, support, and culture of trust and learning to collaborate on instruction
- **Frequent, growth-oriented feedback:** Provide regular feedback from content experts that helps teachers improve instructional practice

Each of these elements has value on its own, but the systems we studied connected them. Teacher teams engage deeply with the specific curricula and materials they use in the classroom, develop and review lesson plans, and analyze assessment results. When teacher leaders observe their peers, they focus on the themes raised during collaborative time and exactly how each teacher presents the material, with real-time feedback that can be applied in the classroom and during team time. Instructional experts work across the elements, adapting curricular materials, leading collaborative planning, and observing and providing feedback to teachers. Taken together, these elements are connected to the system's overall theory of action for how teachers improve and, ultimately, how students learn.

How is **Connected Professional Learning** different from what we see in most school systems?

	TRADITIONAL PD TEACHERS...	**EVOLVING PD** TEACHERS...	**CONNECTED PL** TEACHERS...
RIGOROUS, COMPREHENSIVE **CURRICULA AND ASSESSMENTS** 	> Receive textbooks and a high-level scope and sequence, with standards and sub-standards	> Receive a few sample lesson plans with guiding questions and suggestions for culminating tasks and/or checks for understanding	> **Receive, adapt, and codevelop highly detailed, engaging, and rigorous curricular materials, including lesson plans, sample texts, and student project ideas, which include common student misunderstandings and examples of mastery**
CONTENT-FOCUSED, EXPERT-LED **COLLABORATION** 	> Collaborate in grade-level teams for 45 minutes each week, often discussing administrative issues or student concerns in addition to lessons	> Collaborate in grade-level or shared-content teams for 45 minutes each week, reflecting on past instruction and student results, with periodic guidance from an assistant principal or other building leader	> **Collaborate in shared-content teams for at least 90 minutes/week, analyzing student work, adapting curricula for student and teacher needs, and building teacher skills. Sessions are led by a teacher leader with specific content expertise** > **Collaborate every quarter for a three-hour session to analyze interim assessment results and update unit plans**
FREQUENT, GROWTH-ORIENTED **FEEDBACK** 	> Are formally observed one to two times per year by an instructional coach, building leader, or district-assigned evaluator > Receive feedback through their formal year-end evaluation rating	> Receive feedback twice per year as part of the formal evaluation process > Are occasionally observed by an instructional coach who provides feedback on student engagement and lesson pacing	> **Are observed biweekly by their team's teacher leader, followed by a 20- to 40-minute debrief conversation** > **Receive feedback on the exact lesson that was discussed in collaborative planning time, with guidance on teacher actions such as how to scaffold students' understanding of a text** > **Work with teacher leaders who have sufficient time in their schedules to prepare for and give coaching**

Importantly, Connected Professional Learning has the greatest impact on both teachers and students in a culture of trust and support, where adults at all levels seek and embrace genuine opportunities to improve their practice and deepen impact. But trust, it turns out, does not have to be a prerequisite for Connected Professional Learning. Rather, in the systems we studied, faithful implementation of Connected Professional Learning strategies is helping build and sustain a more trusting and supportive culture that directly supports ongoing growth.

REORGANIZING RESOURCES FOR CONNECTED PROFESSIONAL LEARNING

Connected Professional Learning means shifting from a world of one-off PD investments to an integrated approach that implies a significant change in people, time, and money. But as is often true, *how systems organize* these resources matters as much as the amount they spend on professional learning.

To better understand the magnitude and nature of these resource decisions, we analyzed the start-up and ongoing annual costs associated with Connected Professional Learning by comparing how professional learning resources are used in our case study systems against a set of nine urban districts with which ERS has partnered over the last 12 years. We found that our case study systems used their resources on professional learning quite differently than the comparison, "typical" districts, often investing significantly more than what we commonly see in other systems.

Start-up costs. In our case study sites, leaders sought out federal, state, and philanthropic grants to make important short-term investments. These included supplemental professional learning days for teachers and content experts to become familiar with new standards and curricular material; technical assistance to support new curricula, feedback and data systems; and funding to pilot new teacher leadership roles. In total, **start-up costs could account for up to 2 percent of a district's annual operating expense**, depending on the system's size and specific investments. Access to start-up funding was especially critical for covering transition costs that would otherwise be difficult for smaller districts to afford, as well as for piloting and refining new teacher leader roles and collaboration processes before implementing them systemwide.

Ongoing annual investments. Connected Professional Learning is only sustainable when the costs are incorporated into the annual operating budget. We found that comparison or "typical" districts from the ERS database devote 9-12 percent of their annual operating expense to professional learning activities, with most of these resources devoted to higher salaries for teachers with advanced degrees and coaching and workshops that commonly focus on general pedagogical practice with limited connection to specific curricula or instruction happening in classrooms.

In contrast, ongoing annual costs to support professional learning in our case study districts ranged from **8.9 to 16.2 percent of total operating expense, and 19.5 percent** at the charter management organization Achievement First. Leaders in these systems shift resources from general to curricula-specific supports; where possible, they also spend less on lane pay and more on the elements of Connected Professional Learning summarized above. Productive collaborative planning time is a key investment: compared to a typical district, **our case study districts invested more than two times as much (and our case study CMO more than five times as much)** in content-specific, expert-led collaboration.

FIGURE 1 TOTAL SPENDING ON PROFESSIONAL LEARNING, AS A PERCENT OF ANNUAL OPERATING BUDGET

Typical District	9-12%
Duval County Public Schools	8.9%
DC Public Schools	15.0%
Sanger Unified	16.2%
Achievement First	19.5%

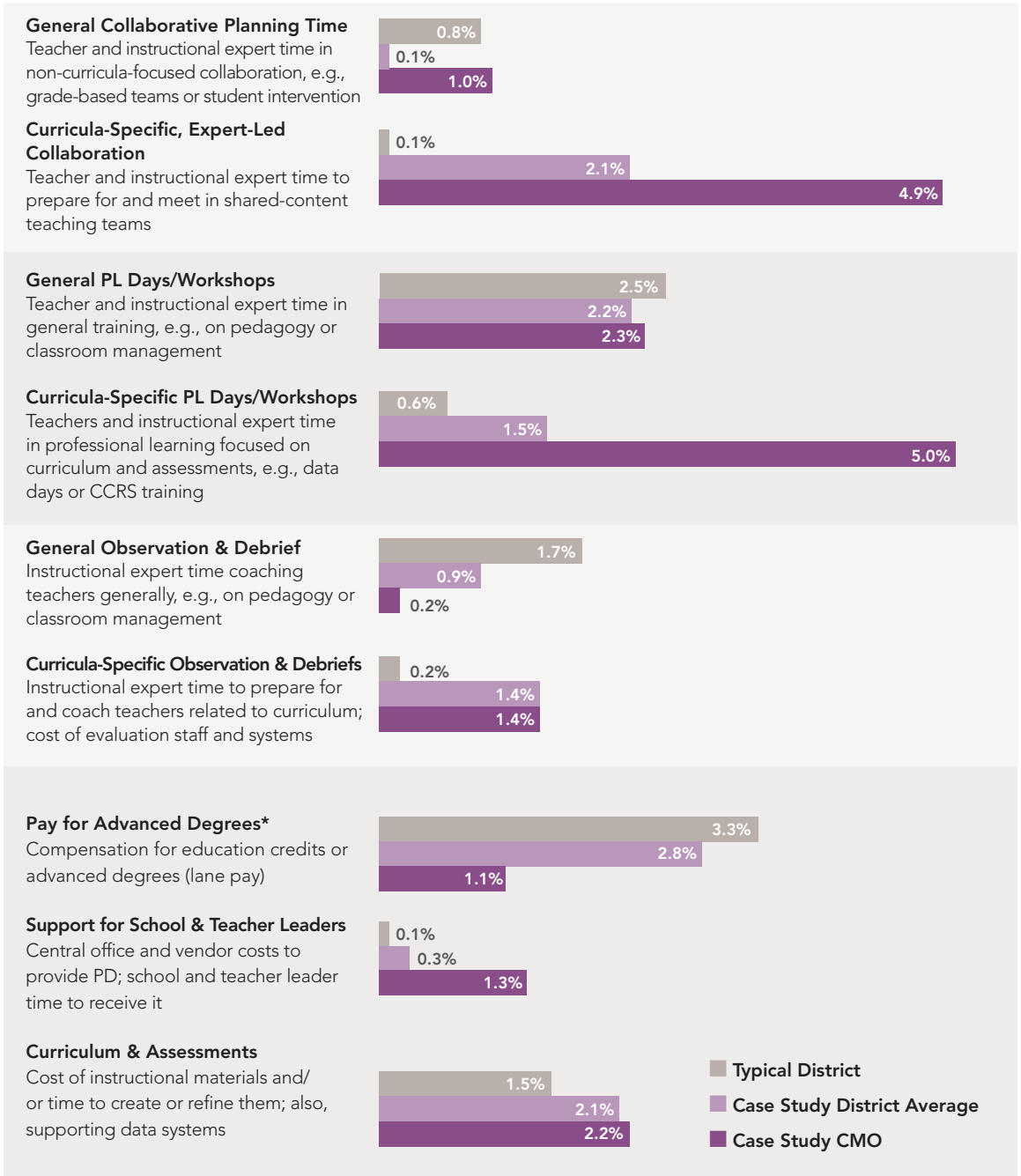
Is there a "best" amount to spend on professional learning?

Each of our case studies has made different strategic choices within its context. For example, Duval County Public Schools made the strategic choice to invest less in "lane pay" (i.e., compensation for advanced degrees, a practice that research suggests is not linked to teaching effectiveness[2]). Achievement First has invested heavily in extra time in the school year, which may not be possible for many districts. No particular number is "correct"—what is important is that districts make deliberate choices within their context to support the elements of Connected Professional Learning.

See page 37 for a more detailed explanation of district spending.

FIGURE 2 SPENDING ON PROFESSIONAL LEARNING ACTIVITIES, AS A PERCENT OF ANNUAL OPERATING BUDGET

Case study systems invest more in curricula-specific activities and instructional leaders than typical districts



* Case study districts vary in how much they spend on lane pay.
Duval County Public Schools: 0.5% Sanger Unified: 3.8% DC Public Schools: 4.2%

HOW COULD A TYPICAL SCHOOL DISTRICT TRANSITION TOWARD MORE CONNECTED PROFESSIONAL LEARNING?

Wherever possible, leaders in our case study systems have found opportunities to repurpose existing resources from low- to high-impact professional learning activities. From their experience and ERS' work with large urban school systems across the country, we have identified five strategies for organizing resources in support of Connected Professional Learning:

1. **Repurpose teacher pay** from spending on advanced degrees toward increased compensation for teacher leaders
2. **Repurpose teachers' time** outside the classroom before extending the teacher day or year
3. **Increase flexibility over school-level schedule period/block length,** class size, and staffing mix
4. **Repurpose school administrator time** away from non-instructional work and towards supporting teachers and instructional leaders
5. **Repurpose resources from traditional textbooks** to an array of curricular materials that are fully aligned with College- and Career-Ready Standards and towards expert support

System leaders' ability to reorganize their existing resources significantly impacts the overall investment they need to make to shift to Connected Professional Learning. To test this idea, we created a sample large, urban school district and assessed how resource use might shift with a move to Connected Professional Learning. Assuming virtually no flexibility to repurpose current resources, we estimate that the total annual investment in professional learning **could increase by *up to* 4.5 percent of annual operating expense.** Districts that can reduce lane pay (which research indicates is not connected to teacher effectiveness[3]) or repurpose existing teacher time and other important school-level resources can significantly reduce the annual incremental cost of Connected Professional Learning. Lane pay can account for as much as 5 percent of a system's operating expense; these resources can be more strategically applied to Connected Professional Learning. Similarly, 15 minutes of daily teacher time is worth about 1.3 percent of a typical district's annual operating budget. If that can be repurposed from non-instructional duties or independent planning to collaborative planning time, that would reduce the estimated maximum cost of transitioning to Connected Professional Learning by over 25 percent.

IMPLICATIONS FOR SCHOOLS AND SCHOOL LEADERS

Leaders in each of these systems acknowledged that there is no magic formula for teacher growth and student success, and that their work continues to evolve. They also recognize that regardless of system-level aspirations, Connected Professional Learning must be embedded in the core of every school.

One way these changes play out is in how school leaders and their teams organize people, time, and money within the school. We call this "strategic school design," and it incorporates an array of school-level scheduling, staffing, and budgeting decisions that have a direct impact on the teacher experience and student learning. Connected Professional Learning requires school leaders to be deeply engaged in all aspects of professional learning in their schools and embrace distributed leadership. For many principals, this shift to a new role as a "leader of leaders" creates new challenges or learning needs. System leaders must address these needs to sustain the impact of a system-led professional learning effort.

DEFINING YOUR OWN PATH FORWARD

Setting up and supporting Connected Professional Learning is complex work, and it takes time. Leaders in the systems we studied have been building their professional learning engines over eight or more years, and have approached the elements as part of an integrated strategy.

However, it's clear that these leaders did not all start in the same place or introduce change in the same way. To define each system's path, leaders should assess both student and teacher needs; make creative use of all available resources from federal, state and philanthropic sources; consider how much and what types of flexibility exist to enable change; and assess how local stakeholders, including the state department of education, unions, the chief financial officer, and parents, could help shape the path.

Connected Professional Learning ultimately ties teacher development directly to student learning. It is more relevant, engaging, and energizing, because it helps teachers work on the problems they face today and the skills they'll need tomorrow. By and large, this is what teachers say they want. And in a world of increasingly higher standards, it is one of the most promising tools we have to promote success for all students.

"The needs of our students come first, and it is through collaboration that we as teachers grow and impact our students in the best way possible."

—— Teacher, Sanger Unified School District

Go Deeper

This paper is part of a suite of publications and tools to help school system leaders understand what Connected Professional Learning looks like, how resources are organized to enable it, and where to get started. Learn more through the following:

PROFESSIONAL LEARNING DIAGNOSTIC ASSESSMENT

Assess how your school system supports curriculum, collaboration, and feedback and compare yourself to strategic practices in our case study systems.

PROFESSIONAL LEARNING CASE STUDIES

Learn more about the elements of Connected Professional Learning from these in-depth stories of the case study systems, including detailed data on how each allocated resources such as people, time, and money to make it happen.

PROFESSIONAL LEARNING TOOLKIT

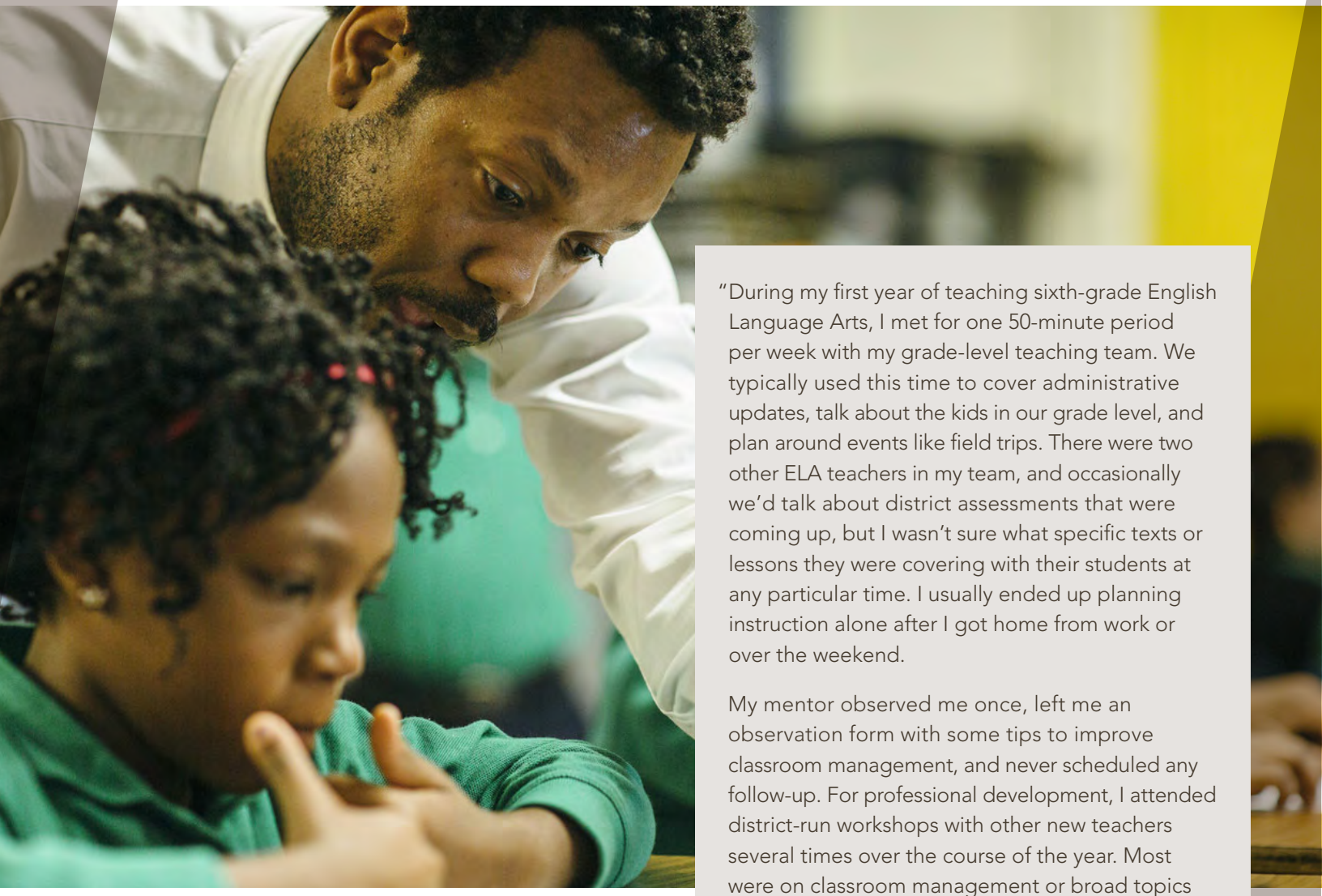
Access the tools and resources used by our case study systems to support Connected Professional Learning (such as curriculum guides, collaborative planning protocols, sample schedules, and more).

WEB RESOURCE

ALL PUBLICATIONS AND TOOLS AVAILABLE AT:

www.erstrategies.org/library/connected_professional_learning

Part I:
Foundations of This Study



"During my first year of teaching sixth-grade English Language Arts, I met for one 50-minute period per week with my grade-level teaching team. We typically used this time to cover administrative updates, talk about the kids in our grade level, and plan around events like field trips. There were two other ELA teachers in my team, and occasionally we'd talk about district assessments that were coming up, but I wasn't sure what specific texts or lessons they were covering with their students at any particular time. I usually ended up planning instruction alone after I got home from work or over the weekend.

My mentor observed me once, left me an observation form with some tips to improve classroom management, and never scheduled any follow-up. For professional development, I attended district-run workshops with other new teachers several times over the course of the year. Most were on classroom management or broad topics like teaching to different learning styles.

As a teacher, I felt like a failure almost every day. It was the hardest job I have ever done."

— Former sixth grade ELA teacher
in a large urban district

BACKGROUND: THE PROBLEM OF PD

From experience and research, we know that great teaching can change a child's life.[4] But the introduction of the more rigorous College- and Career-Ready Standards (CCRS) has made it more challenging than ever for most teachers to realize that level of impact. Today's teachers must deliver engaging, high-level instruction on content that may be very different from their past teaching and learning experiences, working with students who often have greater academic and social needs.

The scale and scope of change is daunting. In the words of Kaya Henderson, former chancellor of the DC Public Schools, "It's disrespectful to expect every one of the thousands of teachers in my system to connect every lesson plan to these new, more rigorous standards every day, on their own."[5]

Part of the answer would seem to lie in providing stronger support—traditionally, professional development. Certainly, American schools invest in it. By some estimates, American school systems already spend as much as $18 billion on PD for teachers.[6] Based on our own experience and analysis, the total investment in teacher development in large urban school systems can be as high as $15,000 to $20,000 per teacher, per year.[7]

And yet, in spite of our best efforts, teacher PD continues to fall short of expectations. The Education Week Research Center recently reported that only 20 percent of teachers "strongly agree" that the professional development they receive around Common Core State Standards is "high quality."[8] In *Teachers Know Best*, published in 2014, The Bill and Melinda Gates Foundation reported that only 29 percent of teachers, principals, and professional development leaders surveyed are "highly satisfied" with current professional development offerings. Most PD is, according to the Foundation's report, "not relevant, not effective, and most important of all, not connected to teachers' core work of helping students learn."[9] TNTP corroborated these findings in 2015's *The Mirage*, reporting no correlation between teachers' PD efforts and increases in effectiveness.[10]

The reasons most PD falls short are no secret: for example, it's often based around one-off workshops, university classes, conferences, and online modules that are disconnected from real-life practice. Teacher evaluation, which has the potential to create a platform for continuous improvement, is focused on assigning a summative yearly rating rather than frequent formative feedback. Some innovations, such as Professional Learning Communities, or PLCs, have improved upon the traditional PD model.[11] In their best form, PLCs are collaborative experiences focused on lesson planning, analysis of student work, and cycles of inquiry and improvement. But many teachers say that they do not experience PLCs or coaching in this way, and even PLC pioneer Richard DuFour has observed that the term PLC has become so overused that it now refers to almost any group that meets for any purpose.[12]

To identify more promising professional learning practices, in 2016 Australian researcher Ben Jensen and his team at Learning First studied teacher development in British Columbia, Hong Kong, Shanghai, and Singapore. In the study *Beyond PD: Teacher Professional Learning in High-Performing Systems*, Jensen found that these school systems organized professional learning around an "improvement cycle" focused on student learning, and dedicated sufficient time, professional learning leaders, and accountability to make it work.[13] These were some of the same characteristics American teachers said they preferred in *Teachers Know Best*.[14] In 2017's *Practice What You Teach*, Ross Wiener and Susan Pimentel of The Aspen Institute argue that it is essential to "weave together the curriculum students engage with every day with the professional learning of teachers," and they provide examples of how this has been done in Louisiana, West Virginia, and DC Public Schools. The Standards for Professional Learning, created by the professional learning association Learning Forward, reinforce many of these findings. The standards outline the characteristics of professional learning that lead to effective teacher practices and improved student results, highlighting the importance of learning communities, leadership, and data, among other factors.

THE SCHOOL AND SYSTEM AS THE UNITS OF CHANGE

Jensen's research highlights the fact that excellent professional learning must be supported at the school *and the system level*. Given the significant instructional shifts required by College- and Career-Ready Standards, school systems must provide schools direction and support. This ensures that all children are prepared to succeed, not just those fortunate enough to attend schools with the leadership, flexibility, and resources to take on such a challenge.

In most American school systems, as much as 75 percent of operating resources are deployed in schools. To implement a job-embedded "improvement cycle," school systems must rethink how resources are organized. We call the deliberate organization of people, time, money, and technology at the school level "strategic school design," which encompasses a common set of high-performance strategies to ensure that students in every school have the opportunity to learn and grow. The linchpin of strategic school design is effective school leadership—and districts must support leaders in that role.

Meanwhile, high-performing systems make it possible for schools, teachers, and students to flourish by providing a clear vision of what more rigorous and engaging instruction looks like, resources to support the transition, and the enabling conditions required to sustain it. This has implications for how teachers collaborate, the amount of time and support available for professional learning, leadership roles, and school culture. These changes will require school systems to revisit a host of policies, contracts, and practices—including school funding, teacher career path and compensation, scheduling and staffing policies, and more. **For any reform to flourish across all schools, the system must be also a unit of change.** Our analysis of professional learning focuses on resource use at this level because of the critical role school systems play in scaling meaningful improvements to teacher practice and student learning.

METHODOLOGY: CASE STUDIES AND COMPARISON METRICS

This paper is based on a close study of four school systems that have seen gains in student performance among a relatively high-needs population, while transitioning to College- and Career-Ready Standards, and where more effective teacher professional learning (PL) has been a centerpiece of their improvement strategy. (See the following pages for information on each.) Aside from these commonalities, all four systems are at different points in their journey, with some farther along than others. For our analysis, we looked at a wide range of financial and human resources data from the case studies, and conducted interviews with both system-level leaders and school-level staff. We also collected data and artifacts from site visits where we observed professional learning practices firsthand. We also present some learnings from a state model—the Louisiana Department of Education, which has been a leader in developing and implementing high-quality curricula and related supports.

COMPARISON TO A "TYPICAL" DISTRICT

Throughout the paper, we reference calculations from a "typical" district. This is based on data from nine urban districts that ERS has worked with in the past, each of which gave us access to financial, human capital, course scheduling, and demographic data. While this is not a statistically significant or randomized sample, it does reflect the practices of a highly relevant cohort of peer districts and puts the case studies in context. Where possible, we also utilize national data sources to pressure test our characterization of what typical practices look like.[15] ERS draws on over 20 years of experience working with more than 40 districts nationwide to inform our understanding of "typical" district practice and how it impacts the experience of students and teachers.

FAST FACTS

DC Public Schools

48,000 Students
113 Schools
$15,000 Per-Pupil Funding
76% Free and Reduced-Price Lunch Eligible

Common Core
State Standards Implemented 2010

STRATEGY HIGHLIGHTS

In 2007, DC Public Schools designed a human capital strategy with the goal to identify, attract, and retain effective educators and manage out chronically low-performing teachers. First, district leaders adopted a new teacher evaluation system called IMPACT and a new compensation system known as IMPACTPlus that tied evaluation and student performance results to pay, and offered significant salary increases to highly effective teachers.

In 2010, the district adopted Common Core State Standards (CCSS) and began to explore new ways of supporting teacher development. A teacher leadership pilot began in 2012, which helped system leaders understand how to structure and support effective teacher leader roles in the context of more rigorous academic standards.

In 2016, DC Public Schools rolled out a districtwide professional learning strategy called Learning Together to Advance our Practice, or LEAP. Through weekly, 90-minute seminars in content-focused teams and biweekly cycles of observation and coaching with content-specific LEAP Leaders, teachers have unprecedented support to improve instructional practice. LEAP is based on a curriculum that is rooted in the CCSS as well as principles of adult-centered learning.

STUDENT OUTCOMES

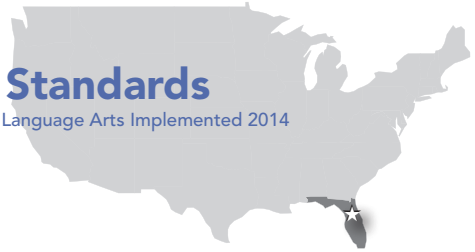
DC Public Schools was the fastest-improving large urban district on the 2015 NAEP-TUDA grade 4 reading assessment. Average student scale scores increased by eight or more points in grade 4 reading, grade 4 math and grade 8 reading from 2011 to 2015, all highs among large urban districts participating in TUDA.[16] In 2016, DC Public Schools' four-year graduation rate reached an all-time high at 69 percent, up 16 percent since 2011.[17]

FAST FACTS

Duval County Public Schools

129,000 Students
157 Schools
$12,000 Per-Pupil Funding
64% Free and Reduced-Price Lunch Eligible

Florida Standards
Mathematics and Language Arts Implemented 2014



STRATEGY HIGHLIGHTS

In 2011, Duval County Public Schools adopted a new teacher evaluation system to better understand and measure teaching effectiveness. When Florida transitioned to College- and Career-Ready Standards in 2014, district leaders took the opportunity to adopt new, more rigorous curricula. They adapted high-quality Open Educational Resources (OERs) to create Duval Reads and Duval Math for grades K-5, which include highly detailed unit and lesson plans.

Additionally, in 2014, the district and teachers' union changed the collective bargaining agreement to allow for 90 minutes of collaborative planning time per week for all schools. Instructional coaches and school-based administrators typically facilitate these meetings, which revolve around district-provided curricula.

Starting in 2016, system leaders introduced a new five-step development cycle. School leaders, coaches, some teacher leaders, and content-specific district specialists meet for four to six full days per year as part of instructional implementation teams. District Specialists also support teacher team meetings through virtual sessions four times per year, where they help instructional coaches model best-practice lesson planning based on the district's curricula. School leaders perform instructional walk-throughs to observe teachers and determine what support is needed, and teachers get early release periods to receive content and curricula-specific support that is tailored to their needs, often virtually.

STUDENT OUTCOMES

Duval County students have made progress specifically in the content areas with new, aligned curriculum and professional learning—K-5 literacy and math. In 2015-16, students outpaced statewide growth in math for grades 3-5 through five and in reading for grade 3 on the Florida Standards Assessment. Duval County Public Schools has also done well in national assessments, ranking fourth in the nation among large urban districts in fourth-grade reading and math on the 2015 NAEP.[18] At 78.8 percent, the district's graduation rate is up 11.1 points from 2011, nearly twice the statewide rate of growth.[19]

FAST FACTS

Achievement First

11,460 Students
32 Schools
$12,000 Per-Pupil Funding
82% Free and Reduced-Price Lunch Eligible

Common Core
State Standards Implemented 2013

STRATEGY HIGHLIGHTS

When Achievement First adopted the Common Core State Standards (CCSS) in 2011, student achievement scores dropped, as they do in many districts. So Achievement First invested in new curricular resources, created a teacher leadership role to write units and lessons, and hired external reviewers to vet these materials for alignment to CCSS. Network leaders also created Intellectual Preparation Protocols, a resource to help teachers deeply understand *how* to prepare for rigorous, standards-aligned instruction.

In 2013, the network began providing four hours a week for teacher collaboration that focused on Achievement First's common curricula and procedures for analyzing student work. Additionally, teachers attend content-based PD during the summer and throughout the school year. In total, teachers spend 35 professional learning days per year collaborating with each other and content experts.

Frequent observation and feedback for all teachers has long been a priority at Achievement First. In 2013, the network aligned its feedback systems with the CCSS-based observation rubrics, helped evaluators norm on instructional shifts, and introduced real-time coaching during observations. A typical teacher in Achievement First participates in roughly 25 to 30 hours of observation and coaching each year with content experts.

STUDENT OUTCOMES

Achievement First schools consistently outperform the schools in their host districts, including New Haven, Connecticut and New York, New York. Achievement First students scored on average within four points of their neighbors in Rye, New York (an affluent and high-performing district), on the 2015 NY Math Capstone. Additionally, Achievement First's students are improving rapidly: proficiency rates have more than doubled since 2013.[20]

FAST FACTS

Sanger Unified School District

11,000 Students
20 Schools
$9,500 Per-Pupil Funding
76% Free and Reduced-Price Lunch Eligible

Common Core
State Standards Implemented 2013

STRATEGY HIGHLIGHTS

In 2004, leaders in Sanger Unified began a concerted effort to improve instruction, adult culture, and student achievement. They focused on strengthening a pedagogical method called Explicit Direct Instruction (EDI), establishing rigorous Response to Intervention (RTI) protocols, and instituting 90 minutes every other week for Professional Learning Communities, protected in the collective bargaining agreement.

When California adopted the Common Core State Standards in 2013, schools had already established a supportive, collaborative culture within PLCs. In 2012, the district increased collaborative planning time to 90 minutes *every* week, in which shared-content teams learn about the new standards, analyze student work, and adapt instruction to students' needs. In 2015, the district increased content-specific professional learning days from five to eight per year for additional time to review of student work and plan instruction.

Sanger Unified also developed new standards-aligned curricula and supplemental instructional materials, which teaching teams adapt for their needs. The district provided training on how to shift from an EDI lens to a CCSS lens, with a key focus on developing unit and lesson plans aligned to the new curricula.

STUDENT OUTCOMES

The district's proficiency rates were two to three times those of peer districts on the 2015 Smarter Balanced Assessment Consortium (SBAC) state assessment.[21] The district has maintained consistently high graduation rates—95.5 percent in 2015, 13.2 points higher than the statewide average.[22]

Part II:
What It Looks Like to Ignite the Learning Engine

Our analysis of *how* the systems we studied reorganized resources in support of Connected Professional Learning is grounded in a deep understanding of *what* Connected Professional Learning looks like in these systems' respective contexts. We identified three elements of Connected Professional Learning that are consistent across the case study systems.

Summary

Connected Professional Learning is built on...

RIGOROUS, COMPREHENSIVE **CURRICULA AND ASSESSMENTS**

Ensure that all schools have access to rigorous and coherent curricula, assessments, and other instructional resources aligned to College- and Career-Ready Standards

> Broad and deep instructional resources

> Carefully vetted

> Designed for teacher adaptation

> Continuously improved

CONTENT-FOCUSED, EXPERT-LED **COLLABORATION**

Organize teachers into teams, led by content experts, that have the time, support, and culture of trust and learning to collaborate on instruction

> Shared-content teams

> Sufficient time

> Leadership by content experts

> Agendas, protocols, tools, and data

> Culture of trust and agency

FREQUENT, GROWTH-ORIENTED **FEEDBACK**

Provide regular feedback from content experts that is focused on helping teachers improve instructional practice

> Personalized attention from coaches

> Sufficient time for observation and feedback

> Support for experts

1) Rigorous, Comprehensive Curricula and Assessments

Ensure that all schools have access to rigorous and coherent curricula, assessments, and other instructional resources aligned to College- and Career-Ready Standards

Research increasingly indicates that teachers' use of high-quality curricula aligned to College- and Career-Ready Standards (CCRS) directly correlates with better student outcomes.[23] System leaders in each of our case studies prioritized teachers' access to this type of comprehensive curricula and used it as a foundational element of Connected Professional Learning.

What does it mean for resources to be rigorous in the context of CCRS? For the systems we studied, it means that curricula guide teachers and students through complex, highly engaging tasks that require "deeper learning": the ability to apply content knowledge to solve problems across different contexts with increasingly less support over time.[24]

The curricula our case studies secured was also comprehensive in that it consisted of detailed units and lessons (including step-by-step tasks, activities, and projects), as well as related materials such as texts, videos, and presentations. Researcher Anthony Bryk has called this "a coherent instructional guidance system."* Importantly, a comprehensive lesson is *not* a script for a teacher to follow. Rather, it includes tasks, questions, and sample texts or prompts that form a rich resource for teachers to adapt to their unique students. Assessments are fully aligned to this curricula, offer students multiple opportunities to demonstrate what they have learned, and prompt students to apply critical thinking and analytical skills. The resulting data enables teachers to adjust instruction thoughtfully and tailor interventions to students' needs.

* Anthony Bryk (2010) defines a **coherent instructional guidance system** as "the what and how of instruction. The learning tasks posed for students...the assessments that make manifest what students actually need to know...the materials, tools, and instructional routines shared across a faculty that scaffold instruction." Bryk stresses that each teacher should have discretion over how to use lesson materials, but relies on high-quality materials and a community of support to be effective.

WEB RESOURCE

CONNECTED PROFESSIONAL LEARNING TOOLKIT

What do high-quality, detailed instructional resources look like?
What is an effective protocol for collaborative planning time?

Our case study systems have generously shared examples from their professional learning practice, including sample schedules, job descriptions, curricular resources, and more.

Examples of these are underlined in purple throughout the rest of this report; see more at the www.erstrategies.org/library/connected_professional_learning.

To ensure that teachers have a strong curricular foundation for student improvement and professional learning, the systems we studied prioritized the following actions:

1. **Provided highly detailed curricular resources (from assessment to lesson plans).** The systems we studied ensure that teachers have access to comprehensive curricula, including daily lesson resources and other tools that are aligned to CCRS. This allows teachers to spend less time on *what* to teach and more on *how* to adapt the lesson to their students' unique needs and interests. Many teachers report that they are freshly inspired by the new material and how higher standards and detailed supports provide the groundwork for students to achieve at higher levels. The specific curricular resources available to teachers look different depending on the system.

   DC Public Schools prioritized curriculum development when it adopted Common Core State Standards in 2011. After restructuring its Academics department, the district developed units of study, followed by material to help teachers adapt to the new standards. Recently, DC Public Schools introduced Cornerstone assignments, which are in-depth instructional tasks and projects that may span days or weeks. Cornerstones are available across all grades and subject areas, and are aligned to the system's overarching assessment strategy. While Cornerstones do not cover all academic standards in a year, they give teachers a common understanding of what excellent, standards-aligned instruction looks like. Teachers review and discuss Cornerstones assignments during weekly lesson-planning and professional learning seminars.

   In contrast, **Achievement First** is working toward providing daily lesson resources for all teachers, in every grade and subject area, for the entire school year. Achievement First also provides Intellectual Preparation Protocols (IPPs) that help teachers move beyond the practical details of each lesson to deeper questions about how teaching and learning will unfold. This preparation includes "evidence that the teacher knows the big idea of the lesson, has developed an exemplar response, and has thought through student misconceptions."[25] The network described IPPs as a foundational tool in helping teachers transition to more rigorous standards.

> "We want teachers focused on the most valuable tasks, like intellectual preparation and anticipating student misunderstandings, not basic lesson creation."
> — Gillette Eckler, Director of Academic Operations and Strategy, Achievement First

Similarly, **Duval County Public Schools** has developed a series of district support documents that include curriculum guides, instructional frameworks, common planning protocols, parent letters, customized homework, and common assessments. These help teachers implement district-adopted curricular materials.

2. **Carefully vetted curricula from multiple sources to obtain the highest-quality materials.** The systems we studied sourced curricula from a combination of traditional publishers, state education agencies, and publicly available Open Educational Resources (OERs), sometimes supplemented with internally developed materials. System leaders chose materials based on the quality of curriculum, teacher need, and how well the materials aligned with relevant standards. Independent third parties such as EdReports have shown that not all curricula marketed as "standards-aligned" are actually fully aligned to Common Core or other College- and Career-Ready Standards, so all systems we studied used a qualified third party or tool to vet materials for alignment. This includes EQuIP, created by the non-profit Achieve to check if individual lessons align with the Common Core State Standards, and IMET, developed in partnership between Achieve, the Council of Chief State Schools Officers (CCSSO), the Council of the Great City Schools (CGCS), and Student Achievement Partners, which checks if textbooks or textbook series are aligned with Common Core State Standards.

   When Florida adopted new College- and Career-Ready Standards in 2014, leaders in **Duval County Public Schools** acknowledged that the state's initial list of resources did not fully meet the standards or provide the support that their teachers needed. Because more than 20 percent of Duval County Public Schools teachers had less than three years' teaching experience, system leaders wanted to provide daily lesson resources and explicit guidance on instructional strategies. Therefore, the district worked with the non-profit organization TNTP and stakeholder groups to rigorously evaluate potential curriculum using IMET. These groups identified high-quality OERs in K-5 literacy and math and adapted them into Duval Reads and Duval Math. The district now uses clear, rigorous selection criteria for adopting new curriculum. For middle-school English Language Arts (ELA), Duval County Public Schools selected materials from a traditional publisher, Houghton Mifflin Harcourt's Collections curriculum, after an IMET analysis of that product and others, and similar work is underway for high school.

> "What my second grader could talk about at the dinner table every night because of exposure to [the new] curriculum was vastly different than each of my three older children….[Its] emphasis on background knowledge changed my son's level of conversation....[In math] when he's tackling problems that my older children are tackling, he can actually problem-solve even though he hasn't been directly taught the strategies linked to answering questions formulaically."
>
> — Dr. Nikolai Vitti, Superintendent of Duval County Public Schools[26]

FIGURE 3 CURRICULUM SOURCES

Our case study systems obtained high-quality curricula from multiple sources

Source	Considerations	Achievement First	DC Public Schools	Duval County Public Schools	Sanger Unified
Purchased from Vendor	> Most common current source > Ties the school system to vendor for future support	●	●		●
Adapted from Open Educational Resources	> Low initial investment but may incur additional costs, e.g., printing > More choice over vendors for support	●		●	
Created In-District	> Requires strong teachers and time for them to develop curricula > May limit technical assistance options	●	●		

3. **Supported teachers in thoughtfully adapting the provided curriculum.** Ultimately, teachers will adapt curricula to match student need and their individual teaching style. The systems we studied are grappling with how to help teachers adapt curricula effectively (e.g., such as facilitating a class discussion in new ways to enhance student participation) without unintentionally lowering the challenge or rigor of a lesson (e.g., through relying on texts that are below grade level).

   The way system leaders address this issue depends on their teacher workforce and overall change management strategy. **Sanger Unified**'s highly collaborative culture, recent turnaround success, and size (11,000 students in 20 schools) allow the district to be more flexible.[27] District leaders require schools to use the district's benchmark assessments and explicitly encourage teachers to work within their professional learning communities (PLCs) to adapt, supplement, and even replace parts of the district-provided curricula. This strategy works well in Sanger Unified to build teacher investment in the curricula because PLCs were well established as effective vehicles for professional learning prior to the district's shift to new standards, and the vast majority of teachers do elect to use the curricula, assessments, and other instructional materials provided by the district in some form.

4. **Improved curricula and assessments over time.** In the systems we studied, leaders collect input from teachers through formal surveys, teacher advisory committees, and frequent school visits and feedback conversations between school-level and district staff.

We looked at the **Louisiana Department of Education** (LDOE) as a model in this realm. When the state agency could not find any existing ELA curriculum that fully met new more rigorous standards, they partnered Louisiana teacher leaders with Common Core experts at LearnZillion to create ELA Guidebooks. LDOE then conducted formal pilots of the curriculum and discovered that the vast majority of teachers wanted a higher level of detail. This resulted in the new ELA Guidebooks 2.0 and over 80% adoption among teachers.[28] The systems we studied also solicited feedback from content experts who work directly with teachers in teams and/or individual coaching to better understand what additional support teachers need.

Simply giving an average teacher access to high-quality curricula provides a statistically significant boost on student outcomes.[29] But the systems we studied integrated new curricula into Connected Professional Learning opportunities to allow teachers to grow their knowledge and skills over time. We explore these critical vehicles for professional learning in the following sections.[30]

2) Content-Focused, Expert-Led Collaboration

Organize teachers into teams, led by content experts, that have the time, support, and culture of trust and learning to collaborate on instruction

Studies of effective teacher collaboration show the impact that it can have on improving instructional rigor and student performance.[31] In *Beyond PD: Teacher Professional Learning in High-Performing Systems*, Ben Jensen and researchers at Learning First studied high-performing school systems around the world: in British Columbia, Hong Kong, Shanghai, and Singapore. They found that 30 to 35 percent of teachers' time is spent on "working in teams with other teachers to develop and improve lessons, observing and critiquing classes, and working with struggling students. [T]eachers also counsel and train each other, constantly observing, evaluating, and improving their practices…This highly professional work environment is uncommon in the U.S."[32] This type of collaboration, which is oriented specifically around how to improve instruction in the context of a specific content area, is directly associated with more effective teaching and stronger student achievement.[33]

In contrast, in our "typical" set of districts, teachers spend the majority of their time outside of direct classroom instruction in individual planning periods and prep, with 4-8 percent of their total time actually devoted to professional growth activities or collaboration. Even when teachers do collaborate, the goal is often not well defined across and within schools. A persistent closed-door culture in many American schools also makes it difficult for teachers to move beyond superficial cooperation to deeper, rigorous collaborative problem solving that leads to better instructional decisions.

The school systems we studied harnessed teacher collaboration time for specific instructional purposes and organized resources around this time to ensure that teachers have the tools and support to use it productively. System leaders prioritized the following:

1. **Created teams that share content, have a balance of teacher skills, and focus on improving instruction and student learning.** In each of the systems we studied, leaders set clear expectations for schools to organize teachers into "shared-content" teams, which are composed of teachers who teach the same content and grade level (e.g., 4th grade ELA) who can collaborate around specific state standards, actual lesson plans, and student responses. When this is not possible—typically due to small grade level sizes and/or constraints on instructional experts' time—school leaders create shared-subject teams across adjacent grade-levels (e.g., 4th-5th grade ELA) and focus on the knowledge and skills reinforced across grades. When possible, team composition is balanced based on teacher expertise, to distribute teacher knowledge and experience across teams. Teachers may also meet in other teams, such as grade-level teams or broader cross-grade and subject teams (e.g., 5th-8th ELA), but do not use this time to review curriculum in detail or engage in the decision making that shapes daily instruction.

   In **Sanger Unified**, shared-content PLCs meet weekly for 90 minutes of collaborative planning time per week. System leaders implemented PLCs as part of the district-wide turnaround that preceded the adoption of CCRS and used these new shared-content teams as the foundation for instructional improvements. After Sanger Unified introduced CCRS, system leaders continued to rely heavily on PLCs as a key vehicle for Connected Professional Learning.

   Shared-content teams in **DC Public Schools** are usually composed of teachers in adjacent grade levels, such as K-2, or ELA Grade 6 through 8. A key component of the district's new professional learning strategy, Learning Together to Advance our Practice (LEAP), is regular collaboration in these shared-content teams. Every week, each team meets for a LEAP seminar, where teachers work with content leads to apply the curriculum in their classrooms, analyze student data, and plan interventions. Teachers in same-subject, cross-grade teams work together on how to improve core skills that students refine across grades. In grades 9 and 10, this might include writing arguments on discipline-specific content that use data and evidence to develop claims and counterclaims fairly.[34] This type of team might also review a sample lesson to explore how well the teacher scaffolded content toward a learning objective, or review sample student work to norm on an exemplar response.

2. **Provided sufficient time for productive collaboration.** All of the systems we studied provide at least 90 minutes of collaborative planning time per week for teachers, without reducing instructional time for students. System and school leaders create time for collaboration either by adjusting teacher and student schedules or by increasing the overall number of hours that teachers work during a school day or week. The method for building this time into teachers' schedules varied based on system context.

DC Public Schools' transition to LEAP reflected a significant shift in why and how teachers are expected to collaborate with each other, but did not require schools to lengthen the teacher day or year. Schools decide how to integrate weekly 90-minute LEAP seminars as part of the 225 minutes of weekly teacher planning time and/or daily 30-minute collaborative blocks that were already in the teacher contract before the introduction of LEAP. In many cases, school leaders chose to repurpose a portion of individual planning time as collaborative planning time by aligning the planning periods of all team members. System leaders provided guidance on how to incorporate time for LEAP seminars and more frequent feedback cycles into their schedules and required all schools to submit a LEAP plan that met a set of criteria for team organization, time, leaders, etc. It has proven extremely important to provide principals support and requirements on how to restructure schedules to achieve professional learning objectives.

> "Each school has had to navigate a different approach [to implement LEAP], but we've found that making those schedules work is one of the most critical enabling conditions for the work."
> — Scott Thompson, Deputy Chief for Innovation and Design, DC Public Schools

In **Sanger Unified**, collaborative planning time came from restructuring the school schedule to allow for early student release once a week. While teachers are in their shared-content PLCs for 90 minutes each week, students at every school in the district participate in free after-school academic and enrichment programs. Local college students run these programs through a Teaching Fellows partnership that the district has funded using a grant from California's After School Education & Safety Program as well as a portion of its locally controlled funding.

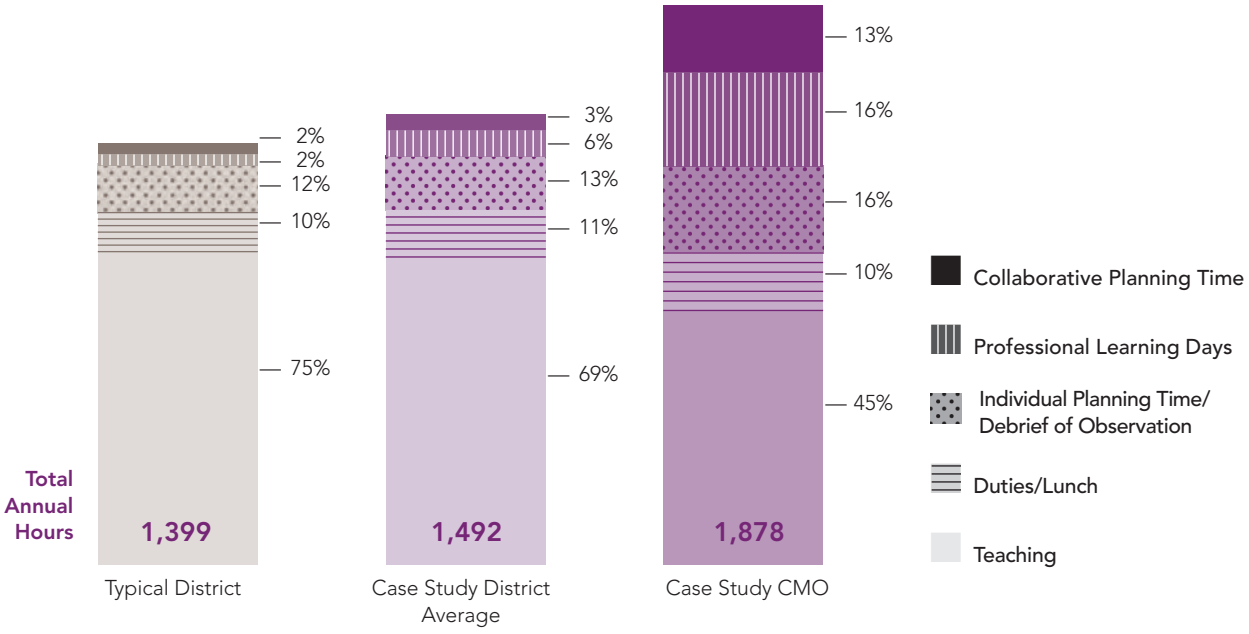
Achievement First's teacher time looks significantly different from the three other school systems we studied. As a charter network, Achievement First has a much longer teacher day and year than most districts, which allows its teachers to spend 55% of their total annual teacher hours outside of the classroom while still maintaining higher total annual student hours. This time outside of the classroom is primarily spent on preparing lessons, reviewing student progress, and adjusting instruction based on results and feedback. Achievement First also dedicates the equivalent of 35 days of time to professional learning via Friday afternoon professional learning sessions, curriculum-focused days of practice that occur four times/year, 12 days of summer training for all teachers, 10 additional days of training for new teachers, and three hours per week for academic deans or principals across schools. Both teachers and students have a significantly longer day than students in the surrounding districts. This means that while Achievement First's teachers spend a lower relative share of

their time on instruction compared to teachers in typical districts, the overall amount of time they spend teaching—and that students spend learning—is higher.

When compared to typical urban school systems, the case study districts we studied offer teachers at least **double—and Achievement First over 10 times**—the amount of time for professional learning that is focused directly on instructional improvement.

FIGURE 4 HOW TEACHERS SPEND THEIR TIME, AS A PERCENT OF ANNUAL HOURS*

Teachers in our case study spend a greater portion of their time in professional learning activities than in a typical district



Annual hours includes required teacher work hours, as specified in contracts and district policies.

3. **Assigned instructional experts who have time and support to facilitate collaborative planning time.** In the systems we studied, instructional experts such as deans, principals, instructional coaches, or teacher leaders assist teachers in refining lesson plans and analyzing data to identify opportunities for intervention and adjustments to instruction. Principals typically decide who they assign as instructional experts and which teams they work with. System leaders facilitate principals' decisions through deliberate design of experts' roles and clear expectations about what knowledge and skills are needed.

   DC Public Schools' LEAP initiative is grounded in the belief that teachers deserve access to high-quality, content-specific expert support, deliberately distributed in schools to support both teams and individual teachers. In 2016-17, content leads were composed of 33 percent teacher leaders, 33 percent instructional coaches, 25 percent assistant principals and 8 percent other school administrators, including principals. All content leads, with the exception of principals, are required to undergo a centrally administered screening process to assess content expertise. Principals use this information when making content lead hiring and assignment decisions.

Importantly, DC Public Schools also provides these content leaders with a curriculum, called LEAP modules, that help them facilitate LEAP seminars (as team meetings are called). This curriculum was created by the central office and is rooted in best practices for adult learning. LEAP leaders can then spend their time internalizing and adapting this curriculum for their specific team of teachers, rather than creating something from scratch.

In **Duval County Public Schools**, school-based instructional coaches traditionally provided expert support to teaching teams. With the shift to Florida's new CCRS, 50 District Specialists, each specializing in a particular grade span (e.g., K-2) and content area, supplement the traditional instructional coaching model. Each District Specialist spends approximately half of his or her time directly supporting school-based instructional coaches to improve their content-knowledge, coaching, and team leadership skills. District Specialists cofacilitate collaborative planning time in schools, as well as facilitate virtual collaborative planning sessions roughly once per quarter. These sessions are new components of the district's PL support cycle and aim to model for both instructional coaches and teaching teams what it looks like to prepare excellent lessons using the district's provided curriculum.

4. **Provided agendas, tools, protocols, and easy-to-use student assessment data to support collaboration and create accountability for the shared time.** All of the case study systems provide clear direction, training, and support to create ownership and accountability for collaborative planning time. This is grounded in a broader theory of action about how adult learning translates to student learning, with a strong belief that the protocols or team guidance are only useful if they improve instruction. Some of the systems piloted or phased in new guidance or protocols for teaching teams before disseminating them more widely. They have also tapped into technical assistance from national experts in teacher collaboration.

   Sanger Unified worked with Richard and Rebecca DuFour, national experts on professional learning communities, to implement powerful cycles of inquiry and data-driven decision making in teaching teams.[35] Schools maintain online Google Docs where each PLC can track what they're doing. These Google Docs can be viewed by anyone in the building, which allows school leaders to see how time is used and encourages PLCs to learn from each other and share new findings and best practices across the school.

5. **Cultivated a professional adult culture and willingness to collaborate.** System leaders in our case studies placed a strong focus on the values and behaviors that should guide effective collaboration. Teaching teams must constantly cultivate trust among colleagues and an inclusive environment for collaboration. This empowers teachers to have constructive disagreements, ask hard questions, and engage their colleagues and experts as active learners.

As part of **Sanger Unified**'s implementation of PLCs, system leaders focused explicitly on how dynamics of change—including relationships, communication, and identity—needed to be addressed in order to build a strong foundation for effective collaboration. It's not enough to just ensure that PLCs have technical details right, such as sufficient time in the schedule and access to common assessments. School systems, schools, and teacher teams all need to buy into the importance of these interpersonal dynamics and how to approach them productively in order to impact teacher practice and student outcomes.[36]

A professional adult culture that supports the trust, candor, and vulnerability required of highly effective teaching teams is often strengthened in the context of feedback conversations between individual teachers and instructional experts. The frequent cycles of observation and feedback that make this possible are examined further in the following section.

3) Frequent, Growth-Oriented Feedback

Provide regular feedback from content experts that is focused on helping teachers improve instructional practice

Over the last decade, many school systems have focused on improving the rigor and usefulness of formal teacher evaluation, identifying chronically low-performing teachers for additional support or to be managed out as well as effective teachers who need to be retained.

Leaders in the systems we studied recognize that traditional evaluation is still crucial, but not well suited to guiding teachers' individual professional development. Research suggests that frequent, content-specific feedback is a key factor in improving teaching effectiveness, so leaders in our case studies created comprehensive development systems to ensure that teachers receive regular, growth-oriented feedback from instructional content experts.[37] This puts teachers in a much stronger position to continuously improve instruction and empowers them to play a more active role in their own ongoing learning and development.

The systems we studied varied in how they approached the integration of coaching and evaluation. In general, it's easier to integrate these two functions in an adult culture characterized by high levels of trust between staff members, candid feedback, and commitment to a growth mindset—at minimum, these conditions should be true for each teacher and her expert support partner. In many school systems, however, this type of professional adult culture is still a work in progress.

System leaders in our case studies supported strong feedback systems through the following actions:

1. **Provided sufficient instructional experts in each school to ensure a low teacher-to-coach ratio.** In our set of "typical" systems, the ratio of teachers to instructional experts within a school may vary from 17:1 to 50:1 across a single system.

   In contrast, the systems we studied have much lower average teacher-to-instructional expert ratios, ranging from 12:1 to 22:1, with far less variation from school to school, due in part to implementation of teacher leadership programs that help to develop and more evenly distribute school-based instructional expertise. In his book *Leverage Leadership: A Practical Guide to Building Exceptional Schools*, Paul Bambrick-Santoyo suggests a ratio of 15 teachers per instructional expert as ideal.[38]

   DC Public Schools began investing in teacher leaders in 2013 through its three-year Teacher Leadership Innovation pilot. With support from a federal Teacher Incentive Fund grant, the system paid the stipends for teacher leaders and covered a portion of the cost of release time, which amounted to as much as 50% of teacher time. The most popular teacher leadership roles developed by schools included facilitating collaborative planning time for shared-content teams and providing coaching and feedback for other teachers, which are now core components of the LEAP Leader role. Because of new LEAP Leader roles, which rely heavily on teacher leaders, the typical teacher in the district can now expect an informal observation and debrief roughly every week—over five to 10 times the amount of content-specific coaching he or she had prior to LEAP. Principals have the flexibility to decide how to integrate content lead roles into their respective school budgets and receive guidance from the district in how to incorporate teacher leader release time and LEAP seminars into master schedules.

> "What was key for us in designing LEAP was realizing that by more clearly structuring the leadership roles that were already available in our system, and by better defining the structures of professional learning that schools should be engaged in, we could provide teachers with dramatically more frequent feedback without having to add either new time or new staff."
>
> —Scott Thompson, Deputy Chief for Innovation and Design, DC Public Schools

FIGURE 5 TEACHERS PER INSTRUCTIONAL EXPERT

Our case study systems ensure that instructional experts coach fewer teachers than is typical

"Instructional experts" are defined as principals, assistant principals, academic deans, instructional coaches, teacher leaders, and others that support teacher professional learning.

**Best Practice is the Bambrick-Santoyo recommendation, see page 30*

2. **Allocated sufficient time for observation and coaching cycles.** In our "typical" district set, we found that principals, coaches, or administrators only observe teachers once a year for 30 minutes at a time, which is less than 0.1 percent of the total 1,000 or so hours that teachers spend teaching in a single school year. That simply isn't enough: a recent National Bureau of Economic Research working paper showed that in schools where teachers receive informal or formal feedback at least 10 times per semester, students perform significantly higher than in schools where teachers receive less frequent feedback.[39]

   The systems we studied deliberately designed expert support roles so they could observe each teacher for typically 15-30 minutes a week followed by a 15-30 minute debrief conversation within 48 hours of the observation. This makes it possible to incorporate feedback cycles firmly into the rhythm of the school, with teachers and coaches working together to improve a variety of skills over time.

   For example, **Achievement First** devotes this high amount of time to observation and coaching: 25- 30 hours per teacher per year. Each teacher receives one 20- minute informal observation followed by a 20 minute debrief discussion each week, plus two comprehensive formal evaluations in a year. Achievement First benefits from a 21 percent longer teacher day and an 11 percent longer year than most typical districts.Achievement First's high

investment in ongoing feedback makes sense given its teachers workforce—approximately 30 percent of whom are new to teaching. Leaders at the school and network level focus heavily on sustaining and strengthening the growth mind-set of all staff members and fostering a culture in which feedback is highly valued.

3. **Provided time, support, and training for instructional experts to develop their own content knowledge and improve their coaching practices.** Leaders in the systems we studied also recognized that teacher leaders and school leaders need significant support to be effective in their roles. This includes ensuring that there is enough time for school and teacher leaders to prepare and document observations and debrief sessions, to receive coaching and feedback on their performance as observers, and to participate in professional learning opportunities to grow their skills.

   DC Public Schools supports its LEAP Leaders via coaching and training through a contract with Leading Educators, who work with district staff in the Office of Instructional Practice. LEAP Leaders attend a two-week-long intensive summer training, as well as four quarterly full-day workshops over the course of the school year. During this time, content leads reflect on past practice, explore upcoming content modules, and collaborate around how to best support the teachers they coach.

FIGURE 6 TIME ALLOCATED FOR OBSERVATION AND DEBRIEF*

Case study systems ensure that teachers receive frequent informal feedback from instructional experts

= 60 minutes

Typical System

Formal evaluation
Observation and debrief: 60 minutes **per year**

Case Study Districts

Formal evaluation
Observation and debrief: 60-180 minutes **per year**

Informal feedback
Observation and debrief: 1,080-1,440 minutes **per year**
That breaks down to 30-40 minutes per week.

Case Study CMO

Formal evaluation
Observation and debrief: 60-120 minutes **per year**

Informal feedback
Observation and debrief: 1,440 minutes **per year**
That breaks down to 40 minutes per week.

**In most cases, time is divided equally between observation and debrief; e.g., a 20-minute observation gets a 20-minute debrief.*

> "We tell teachers that because we expect our students to take feedback and constantly get better, we have the moral obligation to do the same…From teacher to principal to superintendent, we emphasize that everyone can and must get better—every day."[40]
>
> —Doug McCurry, co-CEO and superintendent of Achievement First

Part III:
How School Systems Organize Resources to Support Connected Professional Learning

OBSERVED SPENDING IN CASE STUDY DISTRICTS

In school systems that have implemented Connected Professional Learning, leaders have invested in both near-term, start-up activities and ongoing annual supports to sustain the work. Common start-up costs include additional time and technical assistance to understand and adapt new curricular resources and learn new approaches to collaboration and feedback. Federal, state, and/or philanthropic grants may be particularly important to fund start-up costs in smaller school districts; **Sanger Unified** leveraged a $1.2 million state transition grant to fund teacher time and technical assistance for training on the new Common Core-aligned curriculum. Start-up funding is also critical in systems that want to innovate and rapidly improve on new models of teacher support. For example, **DC Public Schools** used approximately $14.5 million of a multiyear, $62 million Teacher Incentive Fund grant to pilot its Teacher Leadership Initiative*. This pilot allowed the system to effectively scale teacher leader roles through the district-wide LEAP initiative that came after.

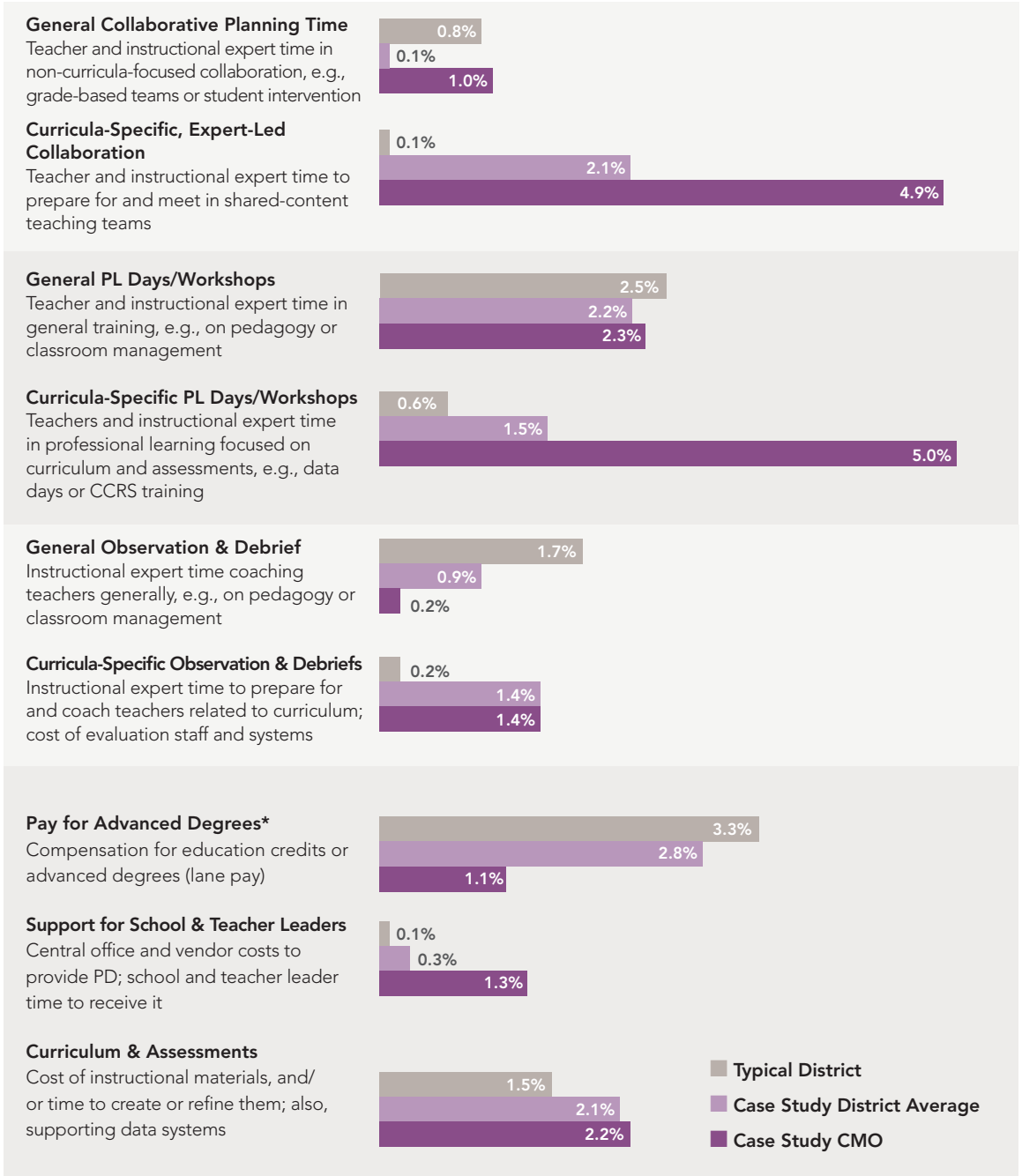
While start-up costs may be covered through temporary funding, school systems need to build Connected Professional Learning into the annual operating budget in order to make it sustainable. To understand the resource implications of shifting from traditional to Connected Professional Learning, we analyzed data from nine large urban districts to create a composite "typical" district that illustrates common spending levels on professional learning activities. ERS also drew on more than 20 years of experience working with more than 40 urban districts across the country to understand how professional learning resources are typically used.

Figure 7 summarizes the most common types of professional learning activities that a typical school system invests in relative to the school systems we studied. In general, our case study systems tend to spend quite *differently*, and often more, on professional learning when compared to a typical urban district. Our case study systems invested more in expert-led collaborative planning time and PL days that are specifically focused on curricula and instruction, as well as time that instructional experts spend in informal observations and debriefs. We also observed that our case study districts were far more likely than a typical district to direct resources toward teacher leaders with content expertise. By distributing instructional leadership across teachers and other staff, these districts could more effectively support content-focused collaborative planning time and feedback cycles.

**The majority of these funds paid for release time for teacher leaders and intensive development and support of teacher leaders in partnership with the non-profit Leading Educators.*

FIGURE 7 SPENDING ON PROFESSIONAL LEARNING ACTIVITIES, AS A PERCENT OF ANNUAL OPERATING BUDGET

Case study systems invest more in instructional leaders and curricula-specific activities than typical districts



* Case study districts vary in how much they spend on lane pay.
Duval County Public Schools: 0.5% Sanger Unified: 3.8% DC Public Schools: 4.2%

IS THERE A "BEST" AMOUNT TO SPEND ON PROFESSIONAL LEARNING?

In a word, no. Each of our case studies has made different strategic choices within their context. One thing that may jump out from the chart below is that three of the four systems we studied invest more (as a percentage of operating expense) in Connected Professional Learning than the other one does. So what's going on in Duval County Public Schools, and what does it mean for teachers and leaders there and in other systems?

Two strategic decisions account for the vast majority of the difference between total spending in Duval County and in the other districts we studied. First, Duval County Public Schools invests far less than our other case study systems in increased compensation to teachers with advanced degrees, also known as "lane pay." We consider this a strategic use of resources, as research demonstrates that having an advanced degree is generally not linked to increased teaching effectiveness.[41] Duval County spends about 0.5 percent of operating expense on "lane pay" versus roughly 4 percent in DC Public Schools and Sanger Unified, which accounts for half of the overall gap between Duval County and those districts. Second, leaders in Duval County have leveraged high-quality open educational resources (OERs). This practice helps Duval County Public Schools maintain an ongoing investment in curricula, assessments and related resources.

Typical District	9-12%
Duval County Public Schools	8.9%
DC Public Schools	15.0%
Sanger Unified	16.2%
Achievement First	19.5%

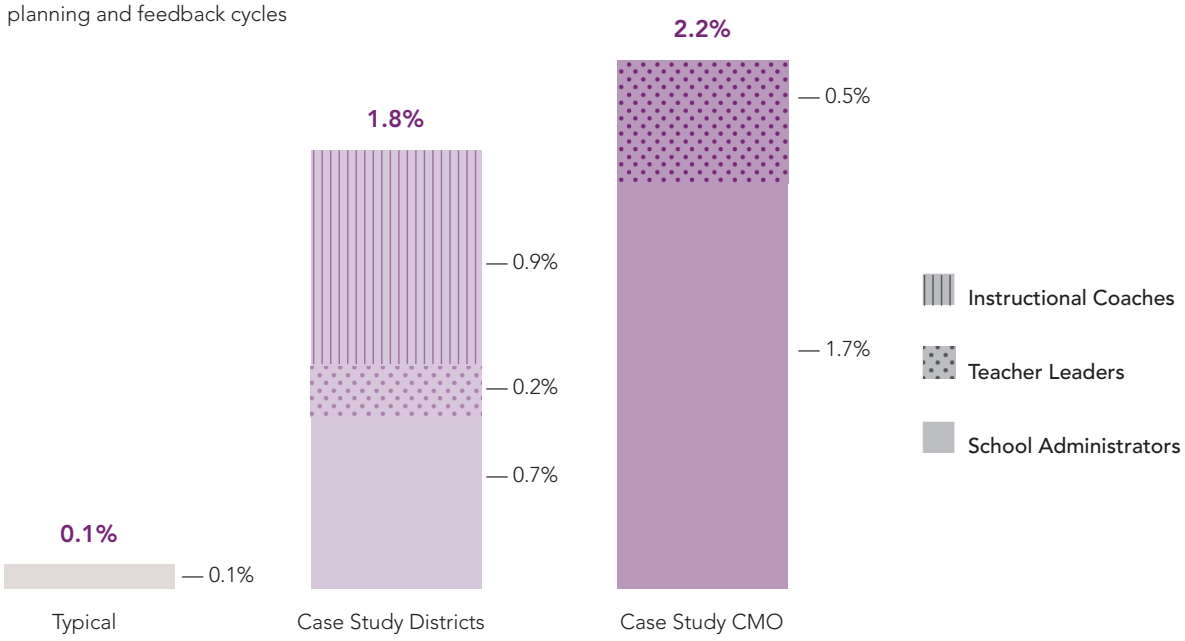
Each of our case study systems has made use of the context and opportunities afforded them to strategically support Connected Professional Learning.

In the systems we studied, the overall investment in professional learning has grown over time. In some cases, this is because system leaders have maintained investments in traditional PL activities while also investing in more strategic actions. For example, **Sanger Unified** and **DC Public Schools** spend, respectively, 3.8 percent and 4.2 percent of operating budgets on pay for teachers who have earned advanced degrees, even after re-structuring other aspects of teacher compensation. This investment in "lane pay" is marginally higher than the average 3.3 percent we see across typical districts, and required leaders in DC and Sanger to free resources from other areas and identify additional interim funding to support their Connected Professional Learning strategies. In contrast, **Duval County Public Schools** has been able to limit spending on lane pay to 0.5 percent of annual operating expense—a strategic move that enables system leaders to devote a greater share of their professional learning resources toward higher-value activities.

Our case study systems also spent differently on the types of positions responsible for Connected Professional Learning. Relative to a typical system, system leaders in our case study districts and CMO site invested significantly more overall in expert support for collaborative planning time and frequent observations and feedback, and a greater share of this investment is in teacher leader roles.

FIGURE 8 INVESTMENT IN INSTRUCTIONAL LEADERS, AS A PERCENT OF ANNUAL OPERATING BUDGET

Our case study systems invest in content-focused teacher leaders and instructional coaches to support collaborative planning and feedback cycles



In a Connected Professional Learning context, it is critical for experts to be very familiar with grade- and subject-specific CCRS standards and related curricula. Developing this level of expertise is challenging in a traditional coaching model, where one ELA coach may serve six or more grade levels in a school or focus on a narrower band of grade levels across multiple schools. By distributing instructional leadership among teacher leaders at a school, each can focus more on his or her content and grade level, and it makes it easier to assign lighter support loads and provide each teacher personalized attention. Elevating highly effective teachers to these leadership roles also offers them an opportunity to share their expertise and earn more without fully removing them from the classroom. The benefits of effective teacher leader roles are significant, but developing such roles takes time. School systems can help scale these roles by developing a fair and accurate system for differentiating teachers' effectiveness as well as aligned compensation and career pathways.

In every system we studied, leaders shifted resources away from less strategic uses and maximized resource flexibilities to make Connected Professional Learning possible. This sometimes involved changing collective bargaining agreements (specifically those related to teacher time and pay), but system leaders across every case study found other significant opportunities to shift resources toward Connected Professional Learning.

FIGURE 9 EXAMPLES OF HOW THE CASE STUDY SYSTEMS REALLOCATED RESOURCES TO SUPPORT CONNECTED PROFESSIONAL LEARNING

	Moved resources from...	To...	Worth % of Annual Op Budget
DC Public Schools	Seniority-based pay	Pay for performance compensation	6.8%
	Typical assistant principal and coach positions, not necessarily responsible for supporting specific content areas	Assistant principal, coach, and teacher leader roles responsible for supporting specific content areas	6.8%
	90 minutes of planning time each week	90-minute LEAP seminars, focused on content	1.5%
	Some students with disabilities in private placements	Students with disabilities placed in the district	1.4%
	Small and underutilized schools, which were closed	Professional learning resources, generally	1.2%
Duval County Public Schools	Funding from traditional curricular resources	Adaptation of Open Educational Resources and new assessment systems	1.0%
	45 minutes/week from noninstructional duties, for elementary school teachers	Collaborative planning time for all elementary school teachers	0.8%*
	Coaching support at elementary schools	Coaching support refocused on new aligned curricula	0.4%
Sanger Unified	Student noninstructional time plus a change to the collective bargaining agreement	90 minutes of collaborative planning time	1.3%*
	Funding from traditional curricular resources	Standards-aligned curriculum	1.2%
	General funds, under new resource flexibility	Three new site-based PLC days	0.5%†
Achievement First	No prior policy	Lower cost of total teacher compensation compared to peer systems	6.2%‡
		Academic deans paid at a lower rate than typical assistant principals	1.5%
	120 minutes of general collaborative planning time	120 minutes of more targeted professional learning	1.4%

**Achieved through change to the collective bargaining agreement; actual cost is neutral*

† California's 2013 law, the Local Control Funding Formula, gave districts more flexibility over all resources.

‡ Roughly 30% of Achievement First's teachers are new to teaching, so the system's compensation costs are lower than peer districts. However, the charter system invests in attracting and supporting new teachers—it pays 20% higher starting salary for new teachers relative to host districts and provides intensive professional learning.

"We know that teachers greatly impact students, and therefore, I am very proud of our district and the intentional commitment we make to develop the professional capacity of our teachers through professional development."

—Principal, Sanger Unified School District

FIVE OPPORTUNITIES TO REALLOCATE RESOURCES

How do the experiences of our case study systems translate to other school districts? We created a composite "strategic" model, which is based on the practices in our case study systems, and compared it to data from our "typical" set of districts. This helps provide a rough model of the cost implications, as a percent of the annual operating budget.

FIGURE 10 PERCENT OF ANNUAL OPERATING BUDGET SPENT ON PROFESSIONAL LEARNING IN A TYPICAL VS STRATEGIC DISTRICT

A strategic district spends an additional .7 percent of the budget by repurposing resources

				% Difference	
PL Activities		**Typical**	**Strategic**	**Savings/ Opportunities to Repurpose**	**Investments**
PL Days/Workshops	General	2.5%	1.8%	-0.7%	
	Curricula-Specific	0.6%	2.0%		+1.4%
Collaborative Planning Time	General	0.9%	—	-0.9%	
	Curricula-Specific	—	2.3%		+2.3%
Observation & Debrief	General	1.7%	0.7%	-1.0%	
	Curricula-Specific	0.2%	0.9%		+0.7%
Pay for Advanced Degrees		3.3%	1.1%	-2.2%	
Support for School and Teacher Leaders		0.1%	0.6%		+0.5%
Curriculum and Assessments		1.5%	2.1%		+0.6%
Subtotal				**-4.8%**	**+5.5%**
Total investment		**10.8%**	**11.5%**	**+0.7%**	

As Figure 10 demonstrates, the incremental system-wide costs may be as low as 0.7 percent of the system's annual operating budget. This assumes, however, that the system is able to shift resources away from less strategic, traditional PD practices. If system leaders are forced to maintain existing investments in education pay and general professional development that is not deeply grounded in specific curricula, the incremental annual cost of implementing Connected Professional Learning could be several times higher. Executing resource shifts from fewer to more strategic practices can be exceedingly challenging for system leaders. Based on our analysis of resource use in the four systems we studied, as well as our experience working with dozens of other large urban districts, **we identified five opportunities** that would make it possible for system leaders to mitigate the incremental costs for implementing Connected Professional Learning:

1. **Repurpose teacher pay from spending on advanced degrees (i.e., lane pay) toward increased compensation for teacher leaders:** American school districts spend an average 30 percent of teacher PL resources rewarding teachers for postgraduate education credits, although research shows no correlation between having earned these credits and teacher performance in most subject areas.[42] These dollars could instead be repurposed toward other forms of compensation, such as pay for teacher leader roles. Restructuring teacher compensation in many school systems may be complex given the influence of state laws and/or collective bargaining agreements, but recent changes in two of our case study systems illustrate progress: both **Duval County Public Schools** and **DC Public Schools** have increased the proportion of teacher pay that is tied to evaluation results and contribution,[43] though in each case the shift came from seniority-based pay (steps) rather than the education pay (lanes).

2. **Repurpose teachers' existing time outside the classroom:** In most school systems, the vast majority of scheduled planning time is individual, not collaborative. In the systems we studied, teachers work a greater number of days outside the classroom (i.e., professional learning days) overall and spend a greater portion of their weekly time in collaboration with other teachers. This additional time is designed to *reduce* the amount of time teachers would otherwise spend planning instruction without guidance or support. Repurposing independent or other noninstructional time for content-focused collaboration is a way to increase professional learning time without adding overall time to the teacher day or year. Both **Duval County Public Schools** and **Sanger Unified** renegotiated their respective collective bargaining agreements to allow at least 90 minutes of collaborative planning time a week for teachers. In both of these cases, the time was sourced from a combination of independent planning and other noninstructional teacher time.

3. **Increase flexibility over scheduling (e.g., period or block length), class size and staffing mix:** When school leaders have flexibility over their budgets, staffing plans, and schedules, they can potentially add collaborative planning time for shared-content teams or release time for new teacher leaders in a cost-neutral way. One strategy is to double block electives or specials to create longer blocks of collaborative planning time. Another strategy is increase class sizes in specials or electives to allow teacher leaders to have release time without increasing class sizes in core subjects.[44] Exercising these types of flexibilities helps ensure that improved professional learning is financially sustainable.

4. **Repurpose school administrator time away from non-instructional work and towards supporting teachers and instructional leaders:** Too many school administrators find that their days are filled with administrative and logistical tasks, which significantly limit their time as instructional leaders—particularly when they are responsible for coaching a dozen or more teachers. In our case studies, school leader time is largely devoted to instructional work. Where these systems have distributed leadership models, school leaders spend more time supporting content-specific experts.

   DC Public Schools leaders discovered that the district was spending significantly more on positions devoted to school operations relative to other districts, but in surveys, principals indicated that they were still spending too much time handling operations. In response, the district introduced a new Director of School Operations role for schools, replacing lower-level operations positions. System leaders developed the new role and recruited staff to fill it, but individual schools receive no additional funds for it. Instead, principals can allocate funding toward this role using their existing, flexible budgets. In schools that chose this new position type, principals have reduced their time on operations from 48 percent to 19 percent of their working hours—freeing up many hours for instructional improvement. The strategic operations director role rapidly gained popularity among principals: in the first year of implementation, nine schools budgeted for it; in the second year, 40 schools did so; and by the third year, 65 schools (over half the district's schools) chose to budget money for the role.

5. **Repurpose resources from traditional textbooks to an array of curricular materials that are fully aligned with College- and Career-Ready Standards and towards expert support to adapt them:** Not all curricula is closely aligned to College- and Career-Ready Standards, even if advertised as such. System leaders carefully chose standards-aligned curricula that met their teachers' needs through a combination of materials from traditional publishers and Open Educational Resources (OER). Although OERs are technically free to access online, their true costs can be similar to traditional publishers' after accounting for the costs of adapting them to teacher/student needs and providing access through technology or printing. Deliberately repurposing resources away from materials that did not meet teachers' needs in a CCRS-context was the primary way systems acquired and developed better, truly standards-aligned curricula. Repurposing funding away from vendors or technical assistance tied to traditional instructional materials also freed up resources for external support and/or internal staff with expertise in the new curricula.

FIGURE 11 COMMON CHALLENGES AND POTENTIAL SOLUTIONS IN IMPLEMENTING CONNECTED PROFESSIONAL LEARNING

CHALLENGE	POTENTIAL SOLUTION
Low per-pupil funding	> Ensure that school leaders have maximum flexibility over school resources > Solicit additional funding for professional learning > Consider private partners as well as state and local sources
Small schools or grade sizes	> Create content-focused teams across grades or across the school > Consider big changes to school schedules
Limited teacher time	> Invest in extending the teacher day and/or year specifically for collaboration
Fixed teacher roles	> Create differentiated expert roles for coaches or school leaders
Traditional "step-and-lane" compensation	> Renegotiate contract terms or repurpose dollars from other sources
Long curricula adoption cycles	> Engage teachers early and often to maximize chances for uptake
Novice or struggling teacher force	> Increase focus on supporting new teachers > Bring in third-party experts to provide support > Use school-based experts (versus teacher leaders) to facilitate collaboration

COST ESTIMATES: THE EXAMPLE OF DISTRICT X

As highlighted above, system leaders need to address two sets of investments to implement Connected Professional Learning—start-up costs and ongoing annual costs. We created a model called District X, a hypothetical urban school district, to estimate what such a shift would cost generally. Our model District X has 60,000 students and an annual operating budget of $630 million, for a per-pupil funding level of roughly $10,500 per student, and 3,750 teachers. We assumed virtually no flexibility over current resource use in District X in order to make a conservative, upper-bound estimate of how much it would cost to shift to Connected Professional Learning.

Given these assumptions, we estimate District X's start-up costs will total **1.2 percent-1.9 percent of the system's operating budget**, or between $7.8 million and $12.2 million. The reason for this range lies in whether existing professional learning days can be repurposed for training on the new College and Career Ready Standards States are in a unique position to help defray these costs through economies of scale. If District X's state can offer either transitional funding to access technical expertise and/or direct training support, it would significantly defray the direct cost to the district. In smaller and/or underfunded districts, this type of support is critical.

FIGURE 12 ONE-TIME START-UP COSTS FOR DISTRICT X (IN MILLIONS)

District X could spend $7.8 to $12.2 million depending on whether it can reallocate resources

Curricula: Find, develop, and/or adapt new curricula and assessments to district context*		
Staff time (including training on instructional shifts)	$4.4 M	
Technical assistance	$0.7 M	
Collaboration/Feedback: Develop content experts		
Time and stipends for teacher leadership pilot programs **	$0.3 M	
Feedback: Develop new systems and tools		
Staff time	$1.9 M	
Technical assistance to roll out the new systems and tools	$0.5 M	
Training on instructional shifts in CCRS		
This can be paid for either by...	**Repurposing existing teacher time †**	**Adding extra teacher time**
5 additional PD days for teachers	$0	$3.2 M
5 additional PD days for school and teacher leaders	$0	$1.2 M
Final Total	**$7.8M**	**$12.2 M**

* *This assumes that school systems acquire new curricula during the existing curricula refresh cycle, which means that District X incurs no incremental acquisition costs.*

** *Pilot program may not be necessary in all districts*

† *May require changes to the collective bargaining agreement*

We also modeled how much it would cost on an ongoing, annual basis for District X to transition to Connected Professional Learning. With virtually no flexibility over existing PL investments, the incremental cost of shifting from traditional to Connected Professional Learning could cost ***up to* $28.1 million per year or roughly 4.5 percent of District X's annual operating budget**.

FIGURE 13 DISTRICT X'S ANNUAL INCREMENTAL INVESTMENTS

District X could spend up to $28.1 million, or less, if leaders can repurpose resources

Investment	Who it affects	Annual cost*	Districts can lower costs if they...
Curricula-specific PD days	Teachers	$7.3M	← Repurpose existing general PD days for content-specific professional learning
Expert-led collaborative planning time	Teachers	$7.1M	← Repurpose individual and general collaborative time for content-specific team work
	Content experts	$4.0M	←
Teacher observations and debriefs	Content experts	$3.8M	
Training and support	Content experts	$2.2M	
Curricula and assessments	Academics team and select teacher leaders	$3.7M	← Repurpose existing investments in curricula development
Total		$28.1M	

As the table shows, the largest ongoing cost of Connected Professional Learning is teacher time. We assume that District X pays teachers for additional time at a prorated salary. It costs $7.3 million to increase the number of curricula-specific PD days from one to eight per year and $7.1 million to increase collaborative planning time from 0 to 90 minutes per week, for a total of $14.4 million to pay for extra teacher time. This is just over half of District X's total annual investment.

A second notable cost driver is how District X pays for its expert support. Teacher leaders should be compensated with a combination of stipend payments and release time to prepare for and lead collaborative planning sessions or observe teachers and provide feedback. If District X schools cannot make significant changes to the number or length of instructional periods or to class sizes, they will have to hire additional staff. District X may also lack flexibility to redirect any compensation from existing full-time instructional coaches or school administrators to teacher leader roles. These increases for time and staff are reflected in $4 million and $3.8 million line items, which account for 28 percent of the annual incremental cost.

These costs are significant because in this scenario, District X has minimal flexibility to repurpose existing resources. The extent to which annual costs rise in an actual district depends on whether traditional PL investments can be used in more strategic ways. As outlined above, if District X is able to repurpose existing teacher time (including current collaborative or independent planning time) for more productive uses and make targeted adjustments to teacher schedules and the staffing mix, the incremental ongoing annual cost of Connected Professional Learning would be dramatically lower.

Part IV:
Where to Start Defining Your Path

Leaders in each of the systems we studied developed an approach that was unique to their system's needs and strengths. As part of their implementation process, they all took stock of their existing assets and challenges, and used that information to define an appropriate entry point to transforming their teacher PL system.

Specifically, these leaders considered four sets of factors in defining their systems' paths.

ASSESS STUDENT NEED AND SYSTEM READINESS FOR CHANGE

Leaders in the systems we studied identified the most urgent student needs and how the challenges of certain student subgroups affected teachers' professional learning needs. If student achievement is significantly lower in a particular grade or school level (e.g., high school), subject area, and/or student need type (e.g., English learners), system leaders might start by focusing on that area, both to boost student achievement and to generate early wins and momentum for continued change. In cases where student need was relatively consistent across the board, system leaders introduced change where it was most likely to be successful. This included, for example, piloting strategies such as teacher leader roles in schools where adult culture was most amenable to new forms of distributed leadership.

The school systems we studied also took into account the cultural and external conditions that make an organization ready for big structural changes. For example, charter networks such as **Achievement First** may be newer institutions, in a "high-growth" phase, with a culture of breaking with traditional policies—and thus have more latitude for change. Traditional school districts often have to contend with longstanding processes and culture, or political or union pressure. Evolving existing supports requires a significantly different approach than building new supports, including by repurposing existing resources and creating pilots to demonstrate the impact of the change. But when a district is in a turnaround phase, low student achievement levels may call into question whether the existing PL infrastructure should be rebuilt from scratch. And strong leaders can often spearhead change in any situation, using data to identify challenges, looking at best practices from other districts, and by simply being willing to challenge assumptions. Education author Rick Hess calls this mindset "cagebusting."[45]

ASSESS YOUR WORKFORCE

Systems vary widely in terms of the nature of the teaching force (e.g., predominantly experienced or many novices) and labor market conditions. For instance, some of the systems we studied—including **DC Public Schools** and the New York City-based **Achievement First** schools—are located in highly competitive labor markets. This can encourage higher teacher turnover, but it also allows the system to continually attract new teachers. Turning over teaching talent was foundational to DC Public Schools' early strategy in particular. In contrast, leaders in **Sanger Unified**—a more isolated district in California's Central Valley—decided to work with the educators already in the system, rather than seeking to replace them.

Another important workforce consideration in the systems we studied was teachers' average experience level. Systems that employ many novice teachers may require additional supports, while a teaching force with more diverse levels of experience might need to adapt supports based on each teacher's experience and expertise. Leaders in all of the case study systems used their clear understanding of these contextual factors to help build a teacher professional learning system that would complement these factors.

ASSESS POTENTIAL FOR THIRD-PARTY SUPPORT

Leaders in the systems we studied took clear stock not only of available internal resources, but also external sources of funding and support that could be applied to support the transition to Connected Professional Learning. These include state, federal, or private sources of funds, with particular attention to supporting transition or start-up costs. For example, **DC Public Schools** learned important lessons through the Teacher Leadership Initiative, funded through a federal Teacher Incentive Fund grant, that it applied to the LEAP initiative.

IDENTIFY PARTNERS IN REFORM

Designing and implementing Connected Professional Learning requires creating connections among a range of critical stakeholders. These include:

- **State Departments of Education (DOEs).** States often unintentionally put restrictions around funding that limit a school system's flexibility. For example, school systems may prefer purchases that are easy to account for under reporting and accounting requirements, especially regarding federal Title II funds. It's much simpler to account for the cost of five instructional coach salaries than stipends and value of the release time for 20 part-time teacher leaders. States can ease these restrictions by allowing school systems to use federal funding more creatively to support professional learning. For example, the state of Florida no longer requires districts to use instructional materials funds only for traditional publishers off the state-approved list; rather, they can be used to adapt Open Educational Resources.

  State DOEs can also change recertification requirements to encourage districts to create teacher leader roles, and vet vendors, curricula, and other supports to ensure tight alignment with state standards. In some cases, they could provide training and other PL directly that small or underresourced districts may not be able to secure on their own.

- **Teachers Unions.** In many districts, teachers unions play an important role in defining the parameters of teacher time and roles in schools. They also have a strong stake in ensuring that their members have access to high-quality support with the new, more rigorous academic standards. Teachers unions and districts can partner to ensure sufficient collaborative planning time and that highly effective teachers have access to leadership roles that directly support instructional improvement and are integrated into the system's broader compensation and career pathways. Achieving the latter will likely require shifting resources away from traditional step and lane structures and toward increased pay for increased roles and responsibilities.

Meanwhile, ensuring sufficient time will likely mean increasing school-level flexibility over how teachers' noninstructional time is used. When a collective bargaining agreement (CBA) prescribes strict, daily requirements composed of small segments of time, it limits school leaders' and teachers' flexibility to use that time.[46] Greater school-level authority over this time can help ensure that teachers' needs can be met.

- **District Chief Financial Officers (CFOs).** CFOs and their teams are not traditional partners in planning professional learning, but they can and should play a valuable role. They are in the best position to quantify the district's current investment in professional learning and identify relevant tradeoffs and fiscal priorities. They are also important partners in determining how PL-related resources can be made more flexible for principals to use in meeting teachers' needs, and can simplify the requirements for budgeting for part-time positions and reporting the use of federal and state funds.

  Furthermore, CFOs can play an important role in improving the underlying processes that govern resources. In **DC Public Schools**, school leaders are now able to budget for teacher leaders and their anticipated release time at the same time that they budget for assistant principals and instructional coach positions. When principals build out their team of instructional experts as part of the school budgeting and academic planning process, it encourages them to make teacher professional learning an integral part of their school improvement plan.

- **Parents and Community Members.** Parents and others are more likely to embrace district strategy, such as increased release time for teachers, if system and school leaders proactively communicate with families about how improved professional learning will positively affect their children's school experience and learning outcomes. School systems can work with students' families to understand how schedule shifts affect them and collaborate with community partners to identify additional sources of coverage (potentially in the form of increased enrichment activities). If the shift to Connected Professional Learning requires an increased financial investment, school systems will also need to engage the broader community in identifying new sources of funding.

IMPLICATIONS FOR PRINCIPALS

For Connected Professional Learning to be successful, principals must shift from being the school's leader to a leader of leaders. Principals in the systems we studied increasingly take responsibility for facilitating learning between instructional experts and teachers. This plays out in a variety of ways:

- **Building team capacity.** Principals should work with teachers and school-level experts, including teacher leaders and coaches, to build skills in effective planning, data analysis, and rigorous instruction. It is not realistic to assume that principals will have deep subject-matter expertise in all relevant content areas. However, principals should understand key instructional shifts and ask subject-matter experts the right questions to drive instructional improvement. This may include facilitating professional learning with school-level experts with a vetted third-party tool, such as EQuIP.

- **Designing schedules that create sufficient time for collaboration and professional learning.** Principals in the systems we studied ensure that experts and teachers have the time, data, and other relevant supports to do this work well. They build schedules with sufficient time for collaboration and minimize teacher time spent on nonessential activities, such as monitoring lunch or recess. Principals also align teacher independent planning blocks with experts' support blocks so they have sufficient time for observation and feedback.

- **Assigning expert roles for maximum impact on teacher professional learning.** In the systems we studied, principals assign experts to groups of teachers based on teacher need and expert capacity—e.g., teachers with greater needs should be paired with higher-capacity experts—ideally ensuring that each instructional expert supports no more than 12 teachers. They also assign teachers to shared content teams that balance expertise, and supervise and support instructional experts on each team.

- **Designing and facilitating school-wide professional learning plans:** System leaders rely on school leaders to customize professional learning opportunities to their teachers' unique needs. Strategic school leaders design school-wide, yearlong professional learning plans through direct consultation with content experts and teachers. When done so inclusively, this process can strengthen teachers' agency in defining and driving their learning opportunities.

- **Administering and overseeing the integrity of teacher evaluations,** including by supervising other administrators who participate in it.

- **Shaping school culture and values to support ongoing learning.** The healthiest contexts for teacher professional learning feature common expectations for instructional rigor across all teachers and instructional experts. School leaders have a unique role to play in leading the development of and modeling strong professional values that facilitate teamwork and honest, constructive feedback.

- **Fostering continuous improvement.** Principals can synthesize teacher and expert feedback on curricular materials, the usefulness of collaborative planning time, and the evaluation and coaching processes. They can also sponsor changes that will make the system stronger over time. These efforts are most powerful when they take place in the context of system-wide processes aimed at rigorously measuring impact and using resulting data to drive decision-making.

Ultimately, the work we've described above is in service of teacher and student learning. If systems want teacher practice and roles to evolve in response to more challenging academic standards, the role of principals will need to evolve accordingly along with the support they receive in their respective school districts.

CONCLUSION AND NEXT STEPS

American school systems must now tackle the challenge and the opportunity of higher academic standards. It is not easy to shake old ideas on and mistrust of professional development. But igniting the learning engine through Connected Professional Learning promises to yield a more satisfying experience for teachers and achievement gains for students.

Ultimately, the school systems we studied have each taken a long-game approach. They differed in their students' needs, teachers' needs, and district-specific constraints and opportunities, but shared a common commitment to working systematically for many years to lay a strong foundation for professional learning that continues to evolve.

Our case study districts have shown that progress is possible *at scale* when school systems deliberately provide the right enabling conditions and supports, and are fully willing to embrace change and continuous improvement on behalf of the children they serve.

We have created tools and resources to help any school system ignite its learning engine. The first step is to self-assess, by comparing your system's current practices against the principles of Connected Professional Learning. Next, system leaders can dig deeper into the details of curriculum, collaboration, feedback, and repurposing resources through a series of in-depth portraits of our case studies. Finally, system leaders can kick off the work by adapting sample schedules, exemplar curricular materials, collaboration and feedback protocols, and more, generously provided by the school systems we studied. All of these resources are described on the facing page.

Go Deeper

This paper is part of a suite of publications and tools to help school system leaders understand what Connected Professional Learning looks like, how resources are organized to enable it, and where to get started. Learn more through the following:

PROFESSIONAL LEARNING DIAGNOSTIC ASSESSMENT

Assess how your school system supports curriculum, collaboration, and feedback and compare yourself to strategic practices in our case study systems.

PROFESSIONAL LEARNING CASE STUDIES

Learn more about the elements of Connected Professional Learning from these in-depth stories of the case study systems, including detailed data on how each allocated resources like people, time, and money to make it happen.

PROFESSIONAL LEARNING TOOLKIT

Access the tools and resources used by our case study systems to support Connected Professional Learning (such as curriculum guides, collaborative planning protocols, sample schedules, and more).

WEB RESOURCE

ALL PUBLICATIONS AND TOOLS AVAILABLE AT:

www.erstrategies.org/library/connected_professional_learning

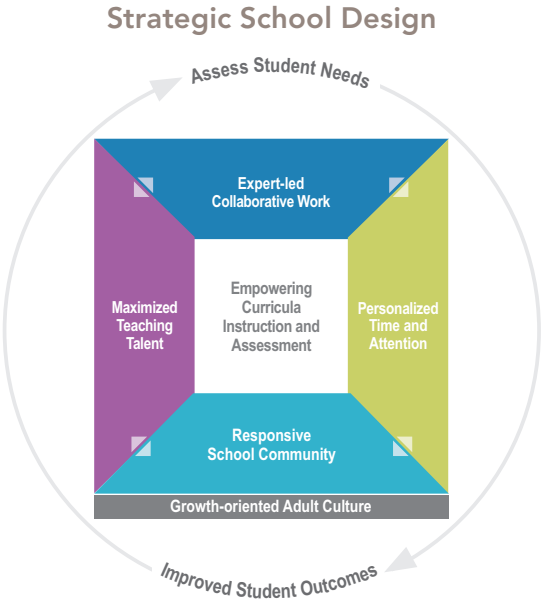
Appendices

APPENDIX A: WHAT IS STRATEGIC SCHOOL DESIGN?

Strategic school designs reflect the deliberate organization of people, time, money, and technology to match the unique needs of a school's students and teachers. Schools that make and sustain dramatic improvements in student learning often share characteristics, which we call "design essentials."[47] Based on our experience and relevant research, we have identified six design essentials, which have the strongest effect when they work together as part of a coherent approach to school improvement.

1. **Empowering Curricula, Instruction and Assessments:** Uphold rigorous, College- and Career-Ready standards and use effective curricula, instructional strategies, and assessments to achieve them
2. **Expert-Led Collaborative Work:** Organize sufficient time for teaching teams to improve instruction with content experts
3. **Maximized Teaching Talent:** Attract and retain the best teachers, ensure that all teachers have ongoing access to frequent growth-oriented feedback, and design and assign roles and responsibilities to match skills to school and student need
4. **Personalized Time and Attention:** Match student grouping, learning time, technology, and programs to individual student needs
5. **Responsive School Community:** Ensure that students are deeply known and more intensive social and emotional supports are integrated when necessary
6. **Growth-Oriented Adult Culture:** Grow a collaborative culture where teachers and leaders share ownership of a common instructional vision and student learning

Connected Professional Learning is embedded in the design of strategic schools, and school systems have a responsibility to support principals in developing these types of schools. Strong school leadership, developed through targeted support from the system, makes it more likely that these design essentials will drive school design development and be implemented with fidelity.



APPENDIX B: ASSUMPTIONS MADE FOR THE DISTRICT X EXAMPLE

Enrollment: 60,000 **Operating Budget:** $630,000,000 **Dollars per pupil:** $10,500 **Teachers:** 3,750

We assume our typical district features traditional teacher PD practices and has no flexibility to repurpose resources, such as by increasing class sizes or adding or repurposing teacher time.

% operating expenses devoted to…	Typical District Assumptions	Strategic District Assumptions
Pay for advanced degrees (i.e., lane pay)	Average for large urban districts in the ERS database	Achievement First
General and curricula-specific workshops/PD days	> Of 4 total PL days, 3 are devoted to non-curricula-specific learning and 1 focuses specifically on curricula > Cost for all days includes the value of teacher time, expert time, and substitute coverage, plus relevant nonpersonnel costs and staff overhead.	> Of 10 total PL days, 2 are devoted to non-curricula-specific learning and 8 focus specifically on curricula. > Cost for all days includes the value of teacher time, expert time, and substitute coverage, plus relevant nonpersonnel costs and staff overhead.
Collaborative planning time	> 45 minutes per week in grade-based teams, focused on school culture, interdisciplinary projects, and cross-classroom interventions. > Cost includes the value of teacher and expert time to participate in these teams, with limited time required from instructional coaches.	> 90 minutes per week in shared-content teams, focused on understanding and applying specific curricula. > Cost includes the value of teacher and expert time to participate in these teams, plus 90 minutes per week for expert leaders to prepare for collaborative time. Expert leaders are drawn from a mix of instructional coaches, teacher leaders, and school administrators.
Observation, coaching and debriefs	> 75 minutes of formal observation and debrief per teacher per year. Also includes the remainder of instructional experts' time not captured elsewhere. We assume this time is spent observing and coaching teachers on pedagogy or classroom management. Cost includes the value of expert time plus a portion of staff overhead.	> 75 minutes of formal observation and debrief per teacher per year, as well as 40 minutes of informal observation and debrief per week for each teacher. Also includes the remainder of instructional experts' time not captured elsewhere. We assume this time is spent observing and coaching teachers on pedagogy or classroom management. Cost includes the value of expert time plus a portion of staff overhead.
Curriculum and assessments	Average of large urban districts from the ERS database	Average of case study systems
Support for school and teacher leaders	Half-day monthly training for school leaders, plus one hour monthly training for teacher leaders. Cost includes value of school and teacher leaders' time to attend these trainings.	Full-day monthly training for both school leaders and teacher leaders. Cost includes value of school and teacher leaders' time to attend these trainings.

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Education Resource Strategies (**ERS**) is a non-profit organization dedicated to transforming how urban school systems organize resources—people, time, technology, and money—so that every school succeeds for every student. We have worked hand in hand with more than 20 school systems nationwide, including 16 of the 100 largest urban districts, on topics such as teacher compensation and career path, funding equity, school design, central office support, and budget development. We also share research and practical tools based on our extensive dataset—including our School System 20/20 framework—and we collaborate with others to create the conditions for change in education.

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