SCHOOL SYSTEM
20/20
TRANSFORMING TEACHING

MAY 2013

A New Vision for Teacher Professional Growth & Support

Six Steps to a More Powerful School System Strategy

One of a series of ERS publications and tools, this paper explores important ways to organize and invest in Professional Growth & Support that strengthen teaching capacity and effectiveness at the system level.

Project Overview

With generous funding from the Bill & Melinda Gates Foundation, Education Resource Strategies (ERS)[1] explored promising practices, challenges, and opportunities in building teaching effectiveness within school systems. The project examines how school systems allocate people, time, money, and technology to improve teaching effectiveness at both the organizational and individual level; the contextual factors that influence system decisions; and how systems can make the best use of limited funding. Throughout this work, ERS expands the traditional definition of teacher Professional Development to Professional Growth & Support, which includes any use of people, time, and money that targets improvement of teaching. Our goal is to challenge school system leaders to organize and invest in teacher Professional Growth & Support in news ways and to provide support through examples and analytic tools.

The resulting series of publications and tools include:

- *A New Vision for Teacher Professional Growth & Support: Six Steps to a More Powerful School System Strategy.* This white paper draws on research, ERS experience with urban school systems nationwide, and detailed analyses of Professional Growth & Support spending in Washington, DC; Duval County Public Schools, Florida; and the charter management network, Achievement First. We present a new vision in which strategic school systems integrate a core set of instructional improvement activities that strengthen and reinforce one another. We introduce principles common to strategic Professional Growth & Support systems, describe these practices in the three systems, and identify the biggest levers and challenges to implementing productive strategies.

- Tools and Support for School Systems
  - *Professional Growth & Support System Self-Assessment:* A self-assessment tool that allows a system to gauge its alignment with the principles for effective Professional Growth & Support that are discussed in the white paper.

    – *Professional Growth & Support Spending Calculator:* A detailed set of worksheets and methodology to enable school systems to quantify their own spending using the frameworks and definitions described in the white paper.

    – *Professional Growth & Support Interactive Presentation:* A narrated PowerPoint presentation that introduces the key concepts and findings from the white paper. Mid-presentation exercises encourage audience members to reflect on their system's Professional Growth & Support investments.

- *Promising Practices in Professional Growth & Support: Case Studies of Aspire Public Schools, Teach Plus, Achievement First, and Agile Mind:* These case studies profile four highly successful approaches to expanding teaching effectiveness. The organizations invest in a variety of activities that are consistent with ERS' *Eight Principles of Strategic Professional Growth & Support System.* These include the tight integration of professional growth with student assessment, performance evaluation, and other teaching support functions, teacher leadership and teaming, time for individual growth and collaboration, compensation, and career path with details on costs and implementation.

Introduction

The looming introduction of Common Core Standards across the nation—combined with the widespread implementation of more accurate and actionable teacher evaluation systems—are creating enormous new demands on teachers. At the same time, these developments provide huge opportunities to invest in teaching effectiveness.[2] Leading edge school systems, charter management organizations, and numerous outside providers are responding by changing how they organize resources to support teachers. Whether traditional school systems will be able to restructure their organizations and spending to take advantage of these new advances is an open question. But their success or failure has huge consequences for the nation's children. If legacy practices prevent traditional school systems from integrating the new ideas, we will have missed an opportunity to systematically support each and every child in having effective teaching throughout their schooling years.

In this paper, we hope to both challenge and support educational leaders to create a more strategic, integrated approach to building teaching effectiveness. To do this, we present a new vision for professional growth that goes beyond traditional "training," and is instead integrated into the essential instructional improvement activities high-performing schools undertake. In the sections that follow, we combine research, ERS experience with urban districts, and deep analysis of three very different school systems—two traditional and one charter management organization—to identify six steps school system leaders can take to implement this vision cost-effectively. With each step, we describe the strategy, share insights from spending and practice data across school systems, highlight challenges, and provide some tips for taking action.

A Holistic Approach to Teacher Professional Growth & Support

The reform rhetoric and literature is filled with discussion of the urgent need to build individual teacher expertise. Here we tackle the next and critical step: building *collective teaching capacity* so that every student can count on having effective teaching every year, in all subjects. Common sense dictates and research demonstrates that this kind of consistency will be especially critical in closing the achievement gap.[3] To do this, we need a holistic view of instructional improvement that connects efforts aimed at building individual teacher skill with the entire set of efforts in which high-performing schools engage to ensure teaching effectiveness.[4] In this vision, schools are the unit of change and school systems play a clearly defined role in leveraging scale and resources to ensure high-impact, cost-effective professional growth.

A Comprehensive Framework

Figure 1 (page 4) describes this comprehensive framework that includes the essential components that a school strategy for improving instruction must address and where professional growth efforts fit in. The framework suggests that highly effective schools and systems begin by defining standards for student learning, instructions, and professional practice. These standards then drive action, organization, and spending in three categories: Hiring and Assignment, Organizational Improvement, and Individual Growth.

Though we do not delve into hiring and assignment practices and spending here, a school's and system's effectiveness in hiring and approach to staffing have big implications for supporting effective teaching. For example, if a school hires only teachers with two or more years of successful teaching experience, then it will need to invest less in new teacher induction. In contrast, a school that relies on a lower-paid cadre of teachers new to the profession will have to invest heavily to build teaching capacity and assign them strategically to ensure support from colleagues and minimize potential negative impact on students.
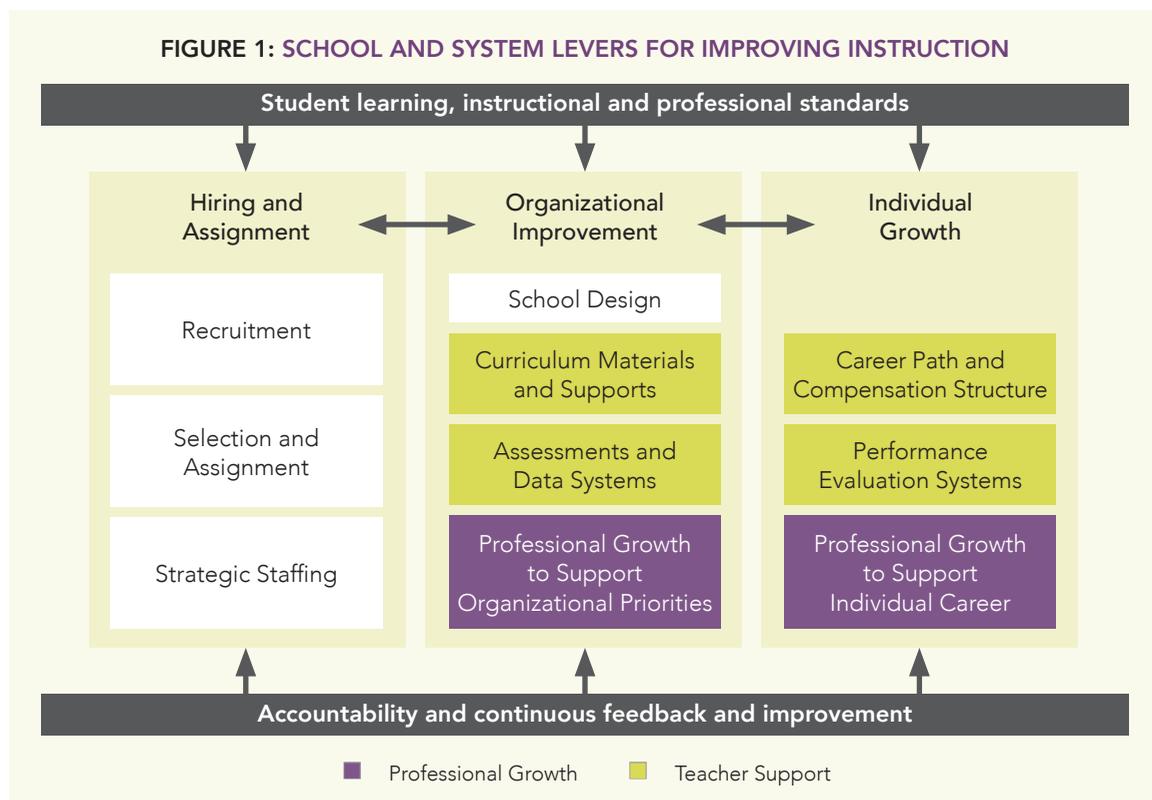
The second category: "Organizational Improvement," refers to the categories of activities that schools must address to continuously improve instruction organization-wide. This category includes four essentials:

1. school designs that organize time, group students and teachers, and distribute teacher talent to maximize performance;
2. curriculum materials and supports;
3. assessment and reporting of student progress; and
4. professional growth opportunities.

Professional growth aimed at organizational improvement helps teachers learn about the curriculum and common instructional practices, as well as engage in collective learning and planning to improve instruction. It includes professional growth aimed at all teachers or subsets of teachers independent of career stage. For instance, we categorize cross-system literacy training for all elementary school teachers as Organizational Improvement, since system and school needs drive this initiative, although individual teachers will also benefit.

These organizational efforts need to be integrated with the final category: Individual Growth, which includes efforts to ensure individual teacher proficiency and continuous improvement over a career. Here, we have defined three levers that operate in unison: 1) professional growth to build individual expertise 2) evaluation of teacher performance and 3) compensation and career opportunities. We classify these essentials as "individual growth" when they link to a teacher's specific career stage or learning needs. Career-stage investments encompass new teacher induction support and team leader training. More customized professional growth investment might include evaluator time spent debriefing after a teacher observation, teacher development of an individual professional development plan, as well as spending on continuing education opportunities available on demand.

Finally, clear performance rubrics and metrics allow systems to measure the impact of the mix of various actions on student performance, react to lessons learned, and adjust to ensure continuous improvement. Underlying and reflecting this vision are ERS' *Eight Principles of a Strategic Professional Growth System,* distilled from available research and our work with client partners, and available in **Appendix A** (page 32). With this framework in mind, we turn to the three school systems and the courses of action they chart as they adopt the Common Core, increase the rigor of performance evaluation, and attempt to build system-wide teaching effectiveness.

FIGURE 1: SCHOOL AND SYSTEM LEVERS FOR IMPROVING INSTRUCTION

| Student learning, instructional and professional standards |

| Hiring and Assignment | Organizational Improvement | Individual Growth |

Recruitment	School Design	Career Path and Compensation Structure
Selection and Assignment	Curriculum Materials and Supports	Performance Evaluation Systems
Strategic Staffing	Assessments and Data Systems	Professional Growth to Support Individual Career
	Professional Growth to Support Organizational Priorities	

Accountability and continuous feedback and improvement

■ Professional Growth   ■ Teacher Support

The Three Systems Studied

To understand the application of this vision and framework within actual school systems, we explore teacher Professional Growth & Support spending and strategy in Duval County Public Schools in Jacksonville, Florida ("Duval"); Washington, DC Public Schools ("DC"); and Achievement First ("AF"), a charter management organization with schools in Connecticut, New York, and Rhode Island. The three systems vary significantly in terms of their size, student performance, funding levels, and other contextual factors. Their different profiles—as well as their attempts to capitalize on trends in technology, data, and practice to improve teaching effectiveness—make them strong candidates for study. We are extremely grateful to system leaders who devoted precious time to numerous interviews and data verification reviews.[5] Their commitment enabled ERS to recode each system's data to include all funding sources and to conduct "apples to apples" analyses of spending patterns. The complete sets of spending data from each school system were available in the following years: Duval 2009–2010, DC 2011–2012, and AF 2012–2013. The analyses represent snapshots of spending and practice taken during these years. Where possible, we supplement these data with information on current and emerging practices in the three systems.

By "context," we mean characteristics of the school system that may affect decisions about Professional Growth & Support—such as the overall capacity of the teacher force, or the student demographics. In **Figure 2** (below) we have tried to place Duval, DC, and AF along a spectrum for each of six factors to better understand their investments to raise teaching capacity across their schools.

Duval County Florida, a traditional local school district, is the largest and lowest-funded system studied. It serves students that have a wide range of income levels and academic needs. It also has

FIGURE 2:
CONTEXTUAL FACTORS THAT INFLUENCE STRATEGY & SPENDING FOR PROFESSIONAL GROWTH

Context Factor	Duval	DC	Achievement First
Overall Funding Level	Low	High	High
Centralization of Curriculum and Instruction	High	High	High
Student Demographics and Variation Across Schools	Mixed	Mostly Similar	Mostly Similar
School Performance and Variation Across System	Mixed, wide variation	Mostly low, moderate variation	Mostly high, little variation
Teacher Capacity and Variation Across Schools	Mixed 25% Novice*	Mixed 25% Novice*	33% Novice*
Flexibility to Reallocate Resources	Low	Low	High

Note: Years of ERS analysis: Duval (2009–2010); DC (2011–2012; AF (2012–2013).
    See Appendix B (page 33) for additional background on Duval, DC, and Achievement First.

 * "Novice" refers to teachers who have between 0–3 years of experience.

a wide range of school performance results with schools rated at the lowest and highest levels of Florida's accountability system. Despite this variation, they employ a highly centralized approach to curriculum, instruction, and professional growth. About 25% of teachers are novice with low-performing schools having a higher concentration of teachers just learning their craft.[6] Washington, DC is also a traditional school district, but at the time of this study was in its second year of implementing dramatic changes to its teacher evaluation and compensation systems. Most of the DC schools serve a high concentration of students who live in poverty and school performance was mostly low. Teacher capacity varied across schools and 25% of teachers were novice.

Spending patterns in DC and Duval embody a mix of deliberate choices as well as a host of legacy practices that both districts are in the process of aligning with emerging strategy and priorities. In contrast, Achievement First, a charter system founded in 2005, has had the freedom to create a system level strategy without the policy constraints and status-quo norms that challenge existing districts. AF schools serve high-poverty students and its schools have higher student performance growth than schools with similar populations. Though AF also has a higher percentage of novice teachers at about 30%, AF plans the mix of experience to fit their staffing and professional development models.

Six Steps to a More Powerful School System Strategy for Professional Growth

Combining the framework and analysis described above with research on effective professional development, we highlight six steps to creating more powerful system level strategy for professional growth.

1. Quantify current spending on the universe of teacher Professional Growth & Support.

2. Capitalize on mandates and growing investments in Common Core standards, student assessment systems, and teacher evaluation to create integrated systems for teacher growth.

3. Leverage expert support to guide teacher teams who share instructional content.

4. Support growth throughout a teacher's career by restructuring compensation and career path.

5. Add and optimize time to address organizational priorities as well as individual needs.

6. Overhaul legacy policies and make strategic tradeoffs.

1. Quantify current spending on the universe of teacher Professional Growth & Support.

To implement a system-wide, well-coordinated strategy for teacher development and growth, system leaders first must quantify all current spending aimed at improving teaching effectiveness. Consistent with the framework described above, we include the allocation of people, time, and money that targets professional growth or supports teaching effectiveness. We begin by defining some necessary terms that we use throughout our analysis.

Some Key Definitions

Professional Growth (PG): This is indicated by the dark purple segments in **Figure 1** (page 4). We deliberately use the term "Professional Growth" instead of the more common terms "Professional Development" or teacher training, much as the organization Learning Forward has adopted the term, "Professional Learning," to connote the long-term evolution of teacher capacity versus one-time events.[7] This spending area applies to investments that further an individual teacher's career or to organizational improvements targeted at teams of teachers, schools, or the entire system. Professional Growth captures spending in three areas:

- **Direct Professional Growth:** Defined as training, conferences, coaching, expert support, and substitute coverage for the purposes of participating in professional growth opportunities no matter which department or organization provides the support. This means we have included *any professional growth support provided by curriculum, evaluation, and assessment functions,* such as content or data coaches.

- **Teacher Professional Growth Time:** The percentage of salary that teachers spend on Professional Growth, as explicitly stipulated in the teacher union contract, calendar, or otherwise mandated for use as staff development or teacher collaboration. Examples include staff development and early release days, data days, or required collaborative planning time. Including the cost of teacher time is critical because it represents an opportunity cost; time not used for planning or professional growth could be repurposed for instruction. School systems typically negotiate extra teacher pay for additional hours or days of work. We do not attempt to quantify additional time that individual school leaders control, since this would not represent a system level investment.

- **Salary for Education Credits:** The increase in teacher salary as the result of accumulating educational credentials. We also refer to this as "Lanes," because teachers move over to a new lane of salary calculation after reaching certain thresholds of accumulated credits. We include it here because the spending explicitly connects to course taking intended to build teacher expertise.

Teaching Support (Support): This is indicated by the green segments in **Figure 1** (page 4). Since these investments are designed to enhance teacher capacity and quality, we link them to the universe of Professional Growth.

- **Curriculum Development and Support:** Here we include staff, stipends, and contracts aimed at developing and writing curriculum as well as ongoing payments for instructional management or guidance systems. We do not include text books and instructional materials as these purchases vary significantly from year to year and would distort the analysis.

- **Teacher Evaluation:** This category includes staff and contractors who administer an evaluation system and all of its components as well as a quantification of the cost of staff time or positions who observe teachers, document, and rate teacher performance. We also include here any ongoing payments for surveys and processing support. We include the time spent debriefing results with teachers as a professional growth expenditure.

- **Student Assessment:** This category includes spending on both end-of-year testing as well as ongoing or "formative" assessments administered by the school system throughout the year. It includes staff or contracted providers who develop assessments and analyze data centrally as well as payments for assessment materials and reports of results. This does not include spending on formative assessments developed or purchased by individual schools separate from system initiatives.

Findings

The total universe of Professional Growth & Support spending is higher than most system leaders recognize or try to manage, especially when including the cost of teacher time for professional growth and higher salaries for accumulated course credits.

Figure 3 (page 9) captures total professional growth and teaching support spending levels in Duval, DC, and Achievement First using these new definitions. Some findings worth highlighting include:

Direct Professional Growth spending (the dark purple segment) was similar across these three school systems as a percent of budget, ranging from 3.5% at Achievement First to 4.3% in DC. On a per-pupil basis, spending was nearly double in DC and AF due to higher overall funding levels.[8] Because of these wide differences in overall spending levels and because we are exploring patterns of spending here, we use percent of budget as our primary comparative metric, supplementing it with per pupil and per teacher when useful.[9]

Large differences in system spending on *Teacher Time and Lanes* contributed to wide ranging total spending on professional growth. DC, which is evolving its compensation system, is still contractually obligated to invest significantly in "lanes." The district spends about 4%, or an average of $6,500 per teacher, to pay for accumulated course credits. Achievement First, on the other hand, devoted almost 10% of its operating budget to pay for teacher time for learning and instructional improvement. As a
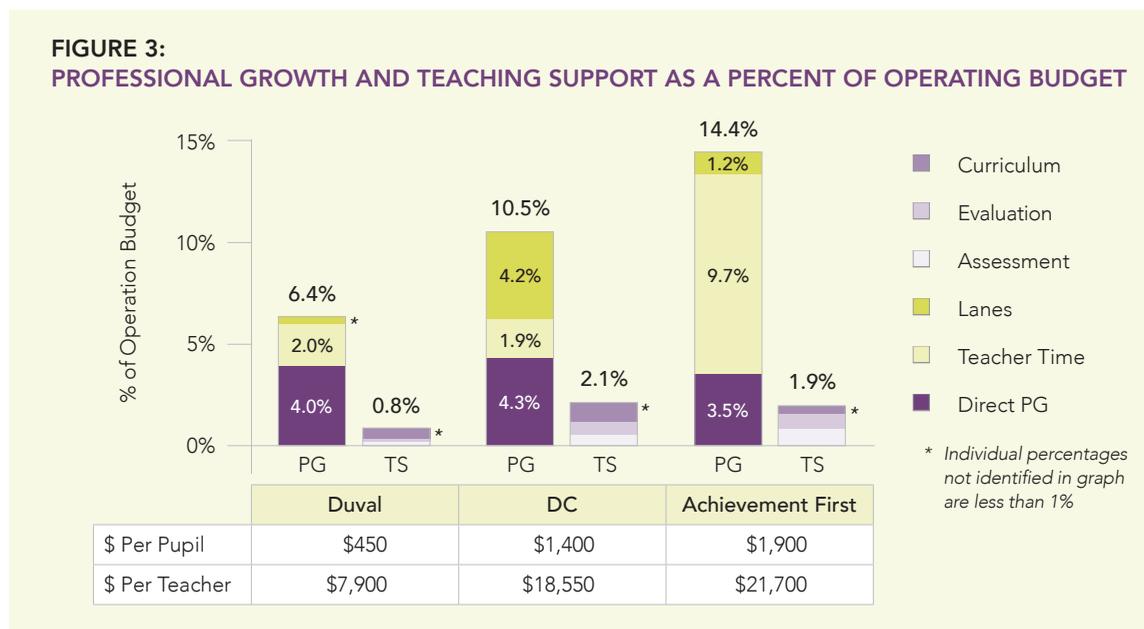
charter management organization, AF has much more flexibility over the amount and use of time throughout the week and year than DC or Duval.[10] We will explore the reasons for these differences further in the sections that follow.

The expansion of data, tools, and practices in teacher support (the light purple and white bars) should be viewed in the context of already sizeable professional growth spending. Spending on assessment, teacher evaluation, and curriculum ranged from about 1% in Duval to 2% of spending in DC and AF. (See **Appendix C**, page 33, for additional spending detail.) Since the years of analysis, all three systems have increased spending on curriculum, assessment, and evaluation. In the next section, we will explore how they are attempting to use these investments to create more powerful integration across Professional Growth & Support levers.

Adding together the universe of investment aimed at improving teaching effectiveness results in totals ranging from 8% to 15% of these systems' operating budgets. This gives system leaders a lot with which to work as well as creating huge responsibility for effective management.

Constraints and Challenges

Comparing spending on professional growth has always been challenging, because many school systems don't consistently code all related spending. So, a complete analysis begins with an inventory of the full range of activities related to teacher Professional Growth & Support. A second challenge arises because much of Professional Growth & Support spending pays for staff positions and outside contracts. It can be challenging to quantify and categorize staff positions because they may perform a variety of roles—not all of which include professional growth. Outside contracts are often

FIGURE 3:
PROFESSIONAL GROWTH AND TEACHING SUPPORT AS A PERCENT OF OPERATING BUDGET

	Duval	DC	Achievement First
$ Per Pupil	$450	$1,400	$1,900
$ Per Teacher	$7,900	$18,550	$21,700

Legend: Curriculum, Evaluation, Assessment, Lanes, Teacher Time, Direct PG

* Individual percentages not identified in graph are less than 1%

reported in one large category with little information on the purpose and target of activity. Therefore, it is critical to conduct interviews to understand the roles staff members play and sort out which contracts support professional growth.

Ways to Take Action

To support school leaders to undertake this analysis, ERS has created a *Professional Growth & Support Spending Calculator* that provides worksheets for data collection and guidance for organizing spending into relevant categories. We have designed it to enable both a quick analysis and a more nuanced look.

2. Capitalize on mandates and growing investments in Common Core standards, student assessment systems, and teacher evaluation to create integrated systems for teacher growth.

The Opportunity

The adoption of the Common Core Standards by 46 states and the District of Columbia, improvements in student assessment tools, and increasing pressure to improve teacher evaluation present school systems with a unique opportunity to invest strategically in teacher development.[11] As the recent Carnegie report on the Common Core points out:

> *Initiatives designed to strengthen teaching, whether through improved curriculum, excellent professional development, or hiring well-prepared teacher candidates, will be tremendously important to standards implementation, but they cannot possibly meet the demand to raise student achievement to Common Core levels unless they are part of more far-reaching changes in school design.[12]*

Rather than manage curriculum development, student assessment, teacher evaluation, and professional development as separate silos with competing demands,[13] systems can forge connections between the departments to ensure that each support area complements and strengthens the others in the following ways:

- Standards-based learning goals and aligned curriculum materials provide the agenda for professional growth.

- Formative student assessment data, aligned to new standards, help target teacher learning needs. Frequent assessment results allow teacher teams to adjust instruction in real time.

- Evaluation rubrics capture the level of teacher performance across the range of skills and knowledge. Observation and evaluation data measure teacher growth and gaps, informing next steps for individual, school level, and system-wide professional growth strategies.

The more tightly the components are linked to each other and to professional growth, the more likely it is that learning and action will be aligned. Making these tight connections can be extremely difficult across a large school system where curriculum materials, student learning challenges, teacher capacity, and school performance vary significantly. This difficulty helps explain why school leaders often complain that the "professional development" the system requires seems irrelevant.

Findings

Of the three systems studied, Achievement First has the most tightly integrated system of Professional Growth & Support. The similarity of needs across its network combined with the flexibility of resources makes this tight integration both possible and effective. Despite legacy policies and structures, DC and Duval are also actively taking advantage of new advances in curriculum, assessment, and evaluation to more effectively target professional growth investment.

Figure 4 (page 12) outlines the ways systems can increase integration within and across the different teacher support areas and direct professional growth and shows how Achievement First has put the basic structures of integration in place. We describe AF's practices below as well as highlight lessons from DC and Duval.

Curriculum

An integrated Professional Growth & Support system rests on a foundation of instructional materials, lessons, and strategies that achieve defined learning goals. AF has revised scope and sequence with aligned assessments across all subjects and grades. In order to align curriculum more tightly with Common Core standards, AF has chosen an approach in which the best teachers or "Lead Planners" provide about 70% of a lesson in a given scope and sequence, deliberately leaving the rest up to the individual teacher. A subscription to the online platform, Better Lesson, allows the system to disseminate the guided curricula across the network, and allows teachers to share extensions and improvements to these lessons. System and school leaders organize time throughout the year to learn about newly developed curriculum and instructional strategies.
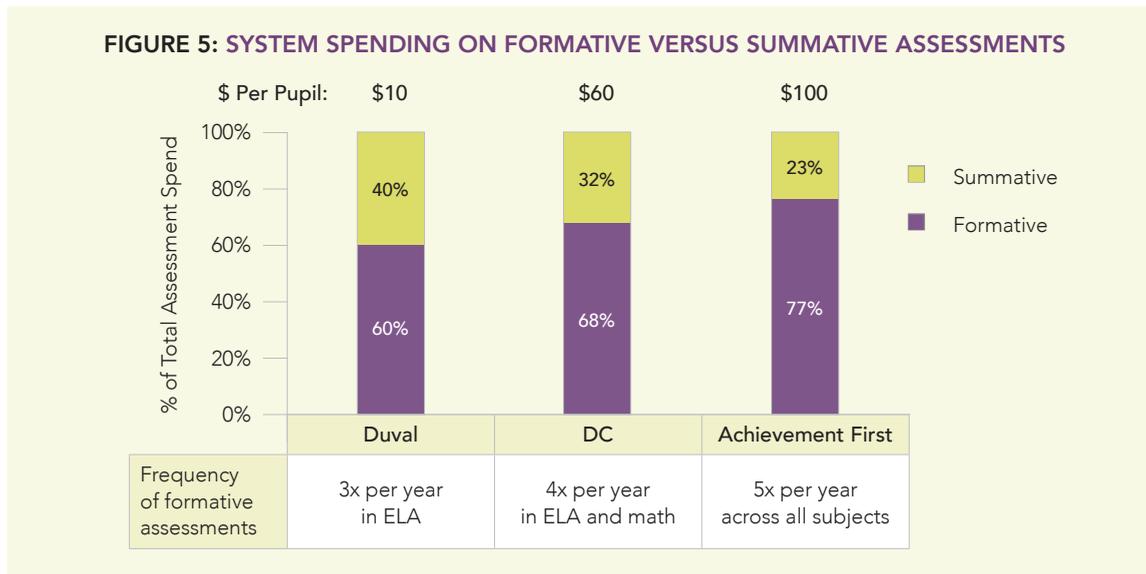
Like AF, Duval and DC are investing to roll out a new scope and sequence that addresses Common Core standards and linking it to professional growth opportunities focusing on ELA and math. DC planned the writing and roll out of the revised scope and sequence to occur in 2011–2014. Both DC and Duval also supplemented the internal scripting with vendor-provided curricula and support to bolster literacy and math for high-risk students. Beyond daily content, these instructional guidance systems include formative assessments, student outcomes reporting, embedded professional development with coaching, and access to support materials. External vendors provide school systems that may lack internal capacity with the option to purchase an integrated instructional system rather than attempt to create the materials, support, and connections in-house.

FIGURE 4: AF'S TIGHTLY INTEGRATED PROFESSIONAL GROWTH & SUPPORT

Components of Integrated PGS Systems	Achievement First
Curriculum • Includes standards-based, content-specific materials by grade and subject • Informs assessment topics/metrics • Informs evaluation rubric	• Guided curriculum in all common core subjects and grades • Reflected in aligned interim assessments • Part of weekly teacher observations
Assessment • Frequent, formative, and summative • Accessible to individuals, teams, experts • Covers multiple grades/subjects • Mapped to specific curriculum • Informs adjustments to instruction for re-teaching and acceleration	• Four interim assessments, one summative per year • Athena system reports by teacher, student, skill, content • All subjects, grades K–12 • Assessments link to content and key skill areas
Teacher Evaluation • Includes student outcomes • Includes frequent observations • Allows time for feedback • Maps to specific content and supports	• Student data included in Teacher Excellence Framework • Weekly informal and three formal per year • Weekly debrief with coach to revise/improve instruction
Direct PG • Content focused • Uses regular collaborative planning time • Team-based with expert support • Uses formative assessment data • Links to specific areas of curriculum, support, and tools • Addresses individual career junctures and needs	• Mix of pedagogy and content knowledge • Weekly grade/department meetings • Data days every six weeks based on interim assessments to refocus instruction on student needs • Better Lesson platform for sharing lessons and materials linked to skill and content areas for each grade and subject

Student Assessment

Additionally, formative assessments allow for the ongoing adjustment of lessons, materials, and instruction to match student needs. With the right support, engaging with others to adjust instruction in response to need is a professional growth opportunity. All three school systems connect assessment results back to specific curriculum areas to inform and improve instruction. **Figure 5** (page 13) shows

FIGURE 5: SYSTEM SPENDING ON FORMATIVE VERSUS SUMMATIVE ASSESSMENTS

$ Per Pupil:	$10	$60	$100

% of Total Assessment Spend

	Duval	DC	Achievement First
Summative	40%	32%	23%
Formative	60%	68%	77%

Frequency of formative assessments	3x per year in ELA	4x per year in ELA and math	5x per year across all subjects

AF has the greatest investment in formative assessments both as a percent of spending and on a per-pupil basis. This higher spending reflects Athena, AF's custom-built web-based interim assessment platform. The assessment tool provides data by school, subject, teacher, and student, for use by instructional coaches during team-based data days and one-on-one individual teacher sessions. The system provides data that supports instruction planning, student interventions, and professional development for teachers.

DC invested to provide formative assessments covering ELA and math in grades 2–10 in 2011–2012. DC used outside vendors to support effective use of formative assessment data. Schools could determine whether to use the assessments and reporting provided by the district or to use services provided by the non-profit organization Achievement Network, which helped a subset of schools leverage assessment data by providing data leaders, coaches, and tools organized by student and learning standard.[14] In addition, Wireless Generation supported a set of schools to go even deeper with more frequent assessment of student progress that links to adjustments in instruction and grouping.
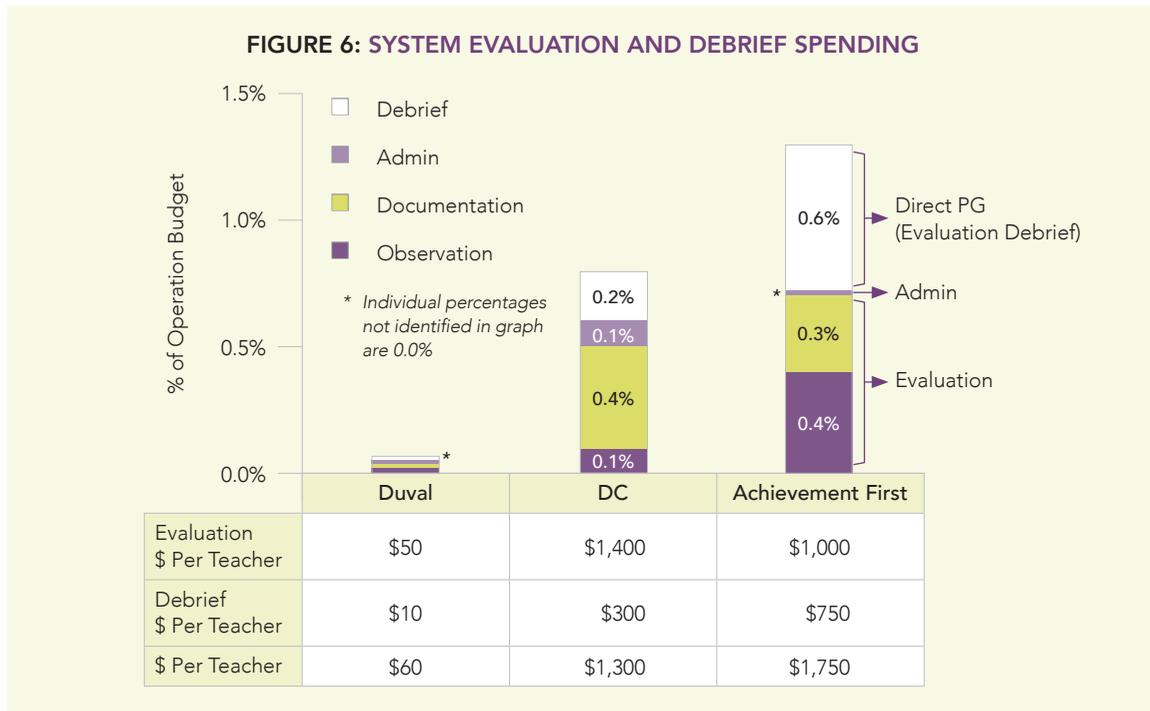
Evaluation

Robust evaluation systems enable a much tighter connection between teacher needs and individual growth investments when results are mapped directly to professional development opportunities.[15] This analysis provides a sense of just how significantly spending on evaluation might increase as systems invest to improve teacher evaluation. In the year we collected the data, Duval County had not yet moved to a new evaluation system and relied on infrequent principal evaluations. **Figure 6** (page 14) shows that Duval spent $50 and DC and AF each spent around $1,000 per teacher on evaluation activities, including:

- **Administration:** the ongoing cost of running and improving the system, including the cost of collecting and processing non-observation data used for ratings (such as student surveys)

- **Documentation:** the time evaluators spend with paperwork related to the ratings and results of observation

- **Observation:** the in-person class visits to assess teaching practice

Both DC and AF had invested in detailed rubrics to rate teacher performance that included student value-added measures and data from surveys and numerous observations. (See the basis of AF's rubric in **Appendix D**, page 34.) These multiple measures provide rich information to help teachers improve their practice. The Measures of Effective Teaching (MET) project, a research partnership funded by the Bill & Melinda Gates Foundation, highlights the need to prioritize support and feedback to ensure that school systems use evaluation measures for improvement and not just high-stakes decisions.[16]

At the time of this study AF invested $750 per teacher in the "debrief" step of evaluation. The term "evaluation debrief" refers to the time evaluators spend with teachers reflecting on evaluation results and *is the key to ensuring that observations and evaluation translate into professional growth* and improved instruction. In addition, finding ways that evaluation information can be effectively shared and accessed helps leverage this investment. At AF, school leaders provide two formal observations that identify teacher growth needs as well as determine progress along the AF Teacher Career Pathway, while coaches perform weekly informal observations with debriefs adding up to a total of 45 hours per teacher per year. The significant time spent on debriefing observations and evaluations with data accessible via the online talent management system, AF Platinum, allows AF to leverage observation for improved teaching effectiveness.

FIGURE 6: SYSTEM EVALUATION AND DEBRIEF SPENDING

	Duval	DC	Achievement First
Evaluation $ Per Teacher	$50	$1,400	$1,000
Debrief $ Per Teacher	$10	$300	$750
$ Per Teacher	$60	$1,300	$1,750

14

In addition to principal observations and feedback, DC used a cadre of full-time evaluators called Master Educators who spent most of their time conducting, documenting, and debriefing observations. These outputs comprised one piece of the teacher evaluation, along with student surveys, student performance data, and school contribution. At the time of this study, DC's investment in the evaluation debrief was $300. Master Educators had large case loads and worked across numerous schools, resulting in limited time and sometimes insufficient context to engage in deep coaching with teachers. Reflecting its commitment to continually improve its process, DC has now placed more emphasis on feedback and has invested more heavily in Master Educators to enable them to spend more time with teachers. DC has reduced the number of formal evaluations per year from three to two, limiting the amount of paperwork and thus reducing dollars spent on "documentation." At the same time DC added one informal evaluation, allowing evaluators to spend more time on communicating how best to improve and connecting teachers to professional development resources.[17]

Because DC's coaches are from the same collective bargaining unit as the teachers, they are prohibited from viewing teacher evaluation scores. This prevents them from accessing information useful to teachers' professional growth and places more responsibility in the hands of teachers to make the link between evaluation and growth opportunities. To facilitate access to professional growth material linked to the district's rubric and instructional approach, DC has invested in an online teacher PD platform which includes resource sets, online modules, and links to teaching videos. The videos cover all nine TEACH standards across all grades and core subject areas to guide teachers in their individual development. Over time, they will be able to measure the extent to which teachers use these videos and whether there are differences in performance related to use.

Constraints and Challenges

Capitalizing on trends in curriculum, assessment, and evaluation to strengthen teaching effectiveness can prove challenging given: 1) the diversity of school and student needs in large systems, 2) potentially conflicting goals for teacher evaluation, 3) fragmentation of existing Professional Growth & Support efforts across departments and functional areas, and 4) lack of necessary expertise.

Diverse School and Student Needs: The type of tight integration across curriculum, assessment, and evaluation and professional growth opportunities described above can be difficult to achieve across a school system with diverse instructional models, and student and teacher needs. Achievement First can do this because, as described in **Figure 2** (page 5), it serves students with similar needs, implements school designs that organize people, time, and technology according to common principles, and manages to a common mix of teacher expertise. Larger, more diverse school systems will need to make two strategic decisions. First, how do they act to ensure all students have access to rigorous curriculum and instruction? Is this part of the school system's core role or are these decisions and resources devolved to individual schools? Second, can schools opt out of the system strategy? New York City's "network" approach embodies one response to these questions. In this model, schools can opt into the district-run system or choose another network to provide the best

Professional Growth & Support for their particular goals and needs.[18] Denver Public Schools uses a portfolio approach where schools have increasing autonomy as they achieve higher levels of performance.[19]

Conflicting Goals for Teacher Evaluations: If evaluations have immediate high-stakes implications for career status or compensation, this can conflict with the use of evaluation as a tool for continuous improvement. For example, although removing low-performing teachers is implicit in a well-functioning evaluation system, this goal can supplant the trust and openness needed to assess areas of weakness and priorities for individual teacher growth.[20] Using evaluation data for improvement assumes access by coaches, which is not always possible due to information fire walls and personnel policies connected to evaluations. Achievement First has chosen to combine the roles of evaluator and career development coach while supplementing this with many other learning opportunities, while DC has largely separated these roles—in part because of contractual challenges. As more systems develop their approaches they might consider: 1) who does evaluation and coaching, and what conditions make it easiest to integrate these roles; and 2) how they will ensure that coaches and others involved in supporting teacher growth have access to observation and evaluation data that inform areas for further development.

Fragmentation Across Departments: Fragmentation of effort across school departments and functions can also be a significant barrier to the various teacher development and support systems working in common and reinforcing ways.[21] Even in highly centralized school systems like DC, coaching resources, for example, are controlled and paid for by a variety of departments and cost centers. The challenge of integration grows in school systems like Duval that address wide variation of school performance and teacher capacity with a school-based coaching strategy. Combining resources across departments and allocating them to school level control is one strategy for ensuring that resources are integrated and support school needs. Systems that choose this strategy need to adjust their accountability systems to make sure that schools don't trade the longer-term payback from professional development in order to pay for short-term needs.

School systems with a highly centralized approach can begin to encourage separate departments to work in concert toward a vision of system-wide improvement by creating a centralized timeline that synchronizes the key aspects of Professional Growth & Support. AF's yearly calendar in **Appendix E** (page 35) illustrates the deliberate orchestration of these different functional areas. Goal setting, training and development, instruction, data-gathering, analysis, feedback, and revision are coordinated and occur in complementary streams of activity. Annual events such as summer trainings are balanced by regularly scheduled collaborative planning. Team data days are timed just after each formative assessment and the two sets of observations occur after teacher goal-setting sessions in early fall and mid-winter. Information platforms make data timely and accessible to all involved parties. The overlapping structure allows different decision makers to be aware of simultaneous efforts and reinforce and share a common vision.

Expertise: Another significant challenge to school systems as they increase spending in Common Core curriculum, detailed assessments, and improved evaluation tools will be in providing adequate expertise to take full advantage of these investments.[22]

- Implementing new curriculum requires training and coaching by content experts.

- Acting upon assessment data requires analysis by data coaches.

- Leveraging evaluation information requires one-on-one debriefing time with coaches.

Even if a school system can find ways to shift resources to support these efforts, they may not have the necessary expertise to do so. This is why systems are turning to outside providers of teacher leadership, coaching, and analysis. It also puts a premium on utilizing technology to lower the cost of mentoring, collaboration, and support.

Ways to Take Action

ERS has designed a *Professional Growth & Support System Self-Assessment:* A self-assessment tool, which takes schools systems through a series of questions to determine the effectiveness of their curriculum, evaluation, assessment, and professional development systems and the level of coordination between them. Additionally, ERS' *Professional Growth & Support Spending Calculator* can assist in efforts to quantify investments in each of the teaching support areas.

3. Leverage expert support to guide teacher teams who share instructional content.

The Opportunity

A large body of research on professional development shows that classroom practice is most likely to improve when teacher learning is linked to the specific content and materials they are teaching, the challenges their children are encountering, and their own knowledge and skill gaps.[23] Instructional coaches and teacher leaders with subject expertise are well-suited to lead this kind of "job-embedded" support. Modeling and coaching that happens as part of regular content-specific planning greatly impacts teaching effectiveness because it solves the actual daily issues that teachers need to address.[24] Such coaching enables teachers to try new approaches, receive feedback on their attempts, and reflect on the results.

Although one-to-one coaching tailors support to individual teachers, providing expert support to a team of teachers multiplies the effectiveness. Team-based coaching takes advantage of both economies of scale and the power of "social capital" built through peer interaction among teachers.[25] When teacher teams can be assembled with members who have the blend and level of expertise needed, they take advantage of complementary skills and content knowledge and raise the bar for all members.[26]
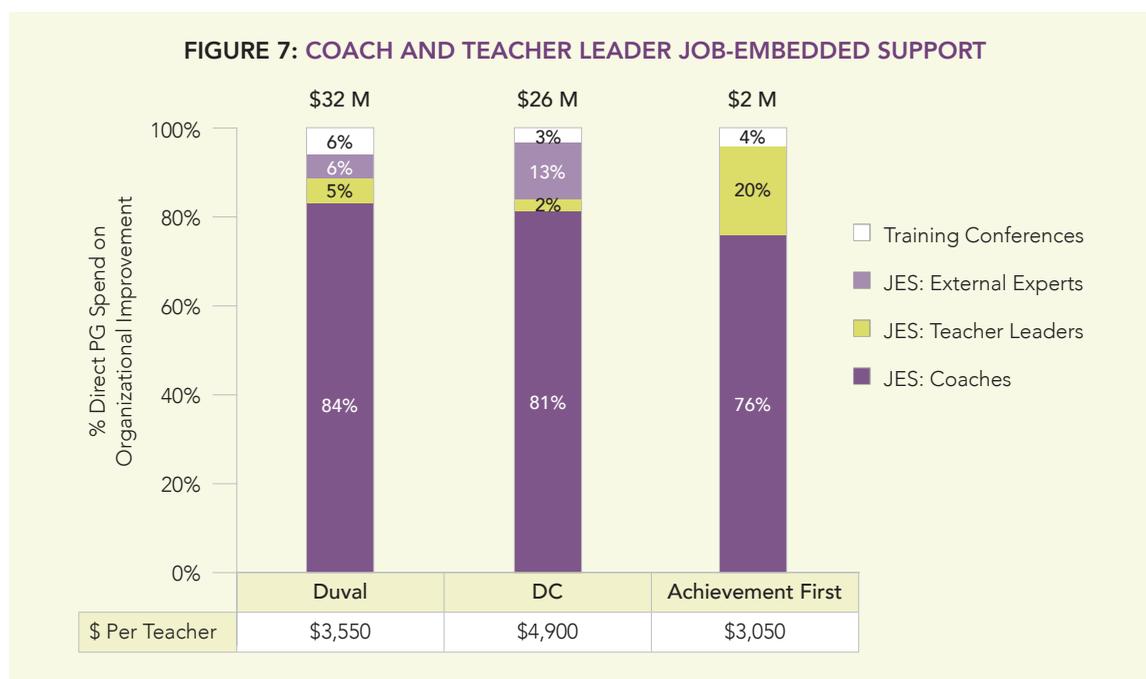
Findings

Coaching represents the largest professional growth investment for all three school systems except for time and lanes. But much of the coaching is not team focused or content specific.

All three systems invested the majority of their direct professional growth dollars in job-embedded support. As we see in **Figure 7** (below), each provided this support largely through coaches and a small corps of teacher leader positions. Further analysis investigated the extent to which this job-embedded support leveraged the power of teacher teams and targeted issues of daily curriculum and content.

System, School or Team?

Except in AF, these coaches mostly supported system level instructional initiatives and school-wide training. **Figure 8** (page 19) divides professional growth spending into 1) system level program implementation, 2) whole school improvement, and 3) content-based teacher teams. While AF designated 44% of this spending to teacher teams, Duval and DC devoted only 6%–7%. Taking each system in turn, AF allocated both time and expert support to enable teacher teaming and school-wide and network-wide learning. The network has organized August staff time for team planning, early release Friday, and data days every six weeks during which teacher teams and academic leaders analyze outcomes, plan interventions, and adjust instruction in specific subjects to meet identified areas of weakness. The professional growth Calendar in **Appendix E** (page 35) shows how time is allocated over the year to enable this mix.

FIGURE 7: COACH AND TEACHER LEADER JOB-EMBEDDED SUPPORT

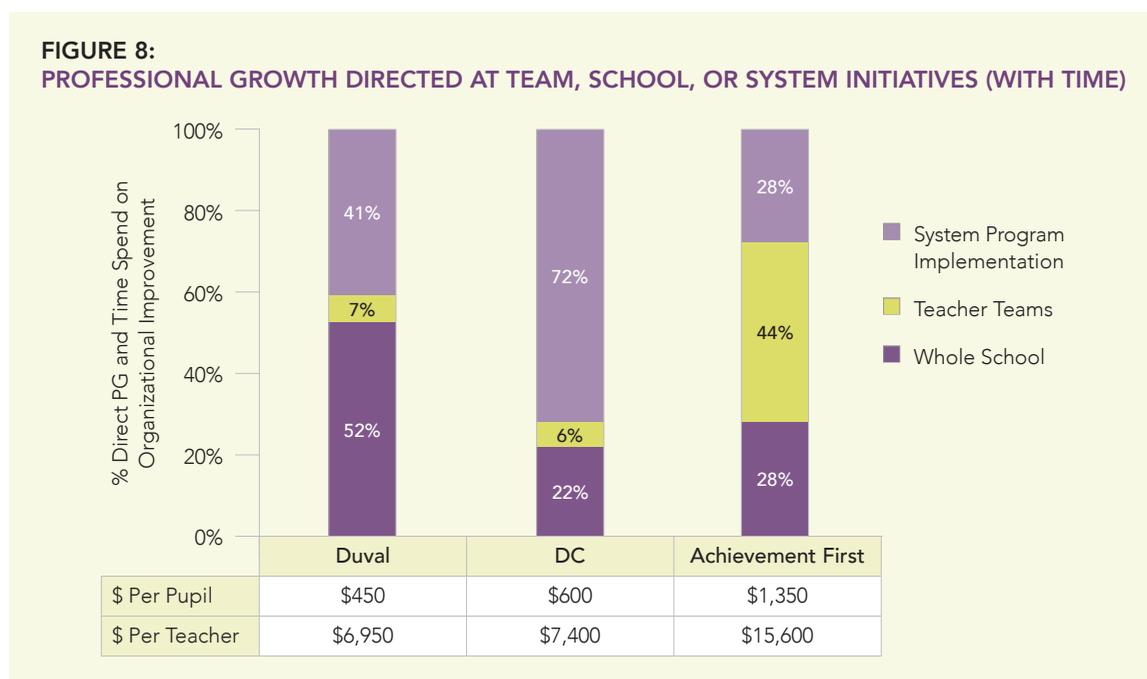|	$32 M	$26 M	$2 M
Training Conferences	6%	3%	4%
JES: External Experts	6%	13%	20% (Teacher Leaders)
JES: Teacher Leaders	5%	2%	
JES: Coaches	84%	81%	76%
	Duval	DC	Achievement First
$ Per Teacher	$3,550	$4,900	$3,050

Duval split its resources evenly between system efforts to implement a centralized curriculum and school-based coaching focused on implementing this curriculum in the lowest-performing schools. These strategies allowed the district to address widely varying school performance and teacher capacity.[27] The small portion of teacher teaming occurred through collaborative learning communities in which instructional coaches guide groups of teachers in 4–8 week cycles of student data review, lesson planning, modeling of effective practice, observation, and feedback. This time did not come from regularly scheduled time for teams during the teacher workday, but from Duval's 44 contractually defined staff development hours.

The majority of DC's spending supported system level efforts to roll out consistent instructional practice in ELA and math by allocating a centrally controlled school-based coach at nearly every school. Like Duval, DC has devoted a portion of its 84 contractually defined staff development hours to "data days," during which teacher teams review and respond to student assessment data. This time and the expert support allocated represents 6% of the district's total spending on professional growth.

General Pedagogy or Content Specific?

At the time of this study, all three systems emphasized general pedagogy more than content-specific instructional knowledge and skills. In AF, despite regular teaming focused on issues of daily teaching, the topics covered during AF's ample professional growth time were weighted slightly toward pedagogy —the knowledge of how students learn regardless of content area. General instructional strategies tended to be the focus during large-group instruction and new teacher induction in August.

FIGURE 8:
PROFESSIONAL GROWTH DIRECTED AT TEAM, SCHOOL, OR SYSTEM INITIATIVES (WITH TIME)

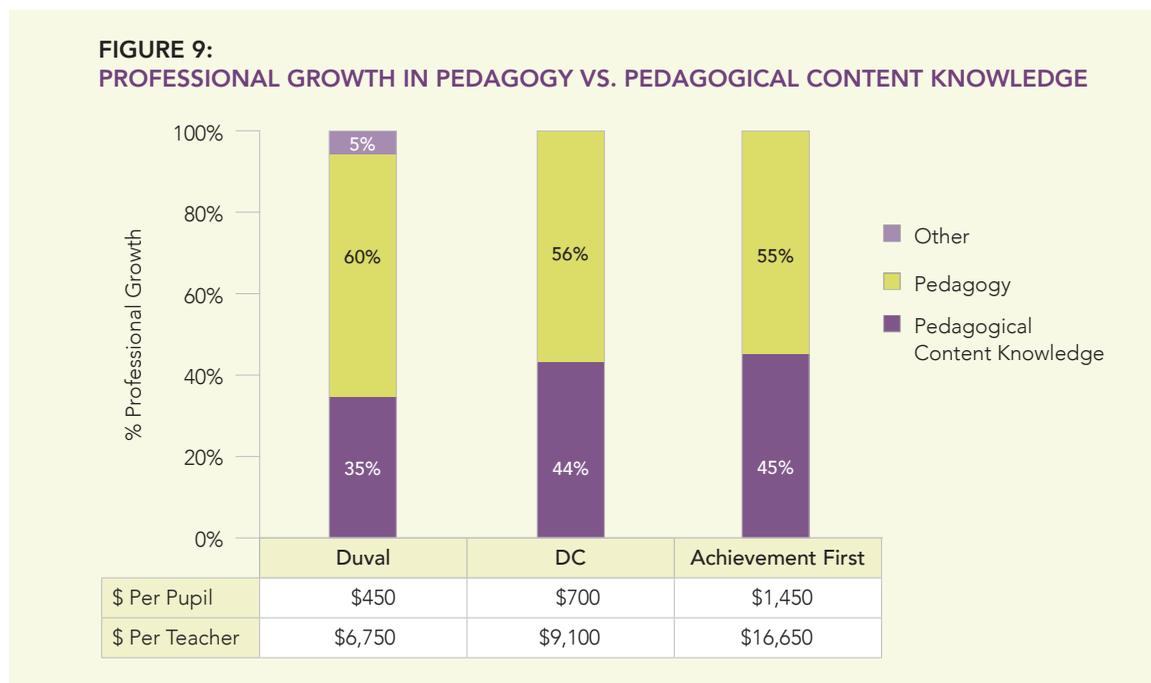|	Duval	DC	Achievement First
$ Per Pupil	$450	$600	$1,350
$ Per Teacher	$6,950	$7,400	$15,600

In Duval and DC the focus on implementing system- and school-directed programs, indicated in **Figure 9** (below), explains this coverage of general pedagogical topics, rather than grade-specific content. With the growing investment in curriculum and regular efforts to use formative student assessment data to address issues by specific class and subject, as DC has already begun to do, all three systems anticipate a significant shift toward developing pedagogical content knowledge, that is, knowledge related to helping students learn specific subject area skills and content. Since research shows that content-specific professional growth has more impact, this shift could have positive results for teacher practice and student performance.

Constraints and Challenges

Providing sufficient expertise to individual teacher teams around grade- and lesson-specific content may be a difficult task for typical urban districts. It also requires distributing this expertise across schools differently. The common approach, used in both Duval and DC, concentrates expertise in the lowest-performing schools where it is most desperately needed. This means that non-turnaround schools had little expert support, with teacher-to-coach ratios upwards of 40:1. These numbers make regular expert-led collaboration with small groups of teachers who share students and curriculum more challenging.

One cost-effective solution to providing expert support is using teacher leaders—classroom teachers with partial responsibility for leading grade or subject teams. Both DC and AF provide opportunities for highly effective teachers to expand their career prospects through teacher leadership positions. Since this study was conducted, DC has added opportunities for teachers to earn stipends of $2,000

FIGURE 9:
PROFESSIONAL GROWTH IN PEDAGOGY VS. PEDAGOGICAL CONTENT KNOWLEDGE

	Duval	DC	Achievement First
$ Per Pupil	$450	$700	$1,450
$ Per Teacher	$6,750	$9,100	$16,650

Note: Numbers reflect geographic COLA.

or more by facilitating school-based data meetings, or applying to be a "T3 Teacher Leader" and work in a high-needs school. The T3 program, operated by the non-profit organization Teach Plus, provides a potentially powerful option for school systems that may not have sufficient teacher expertise in-house. Teach Plus recruits and rigorously screens high-potential teacher leaders from inside and outside the system, places them to work in cohorts together in schools, and provides professional growth opportunities for them throughout the year. AF teachers can work as Teacher Coaches, Academic Deans, and Deans of Students/Culture while remaining in the classroom.

To effectively leverage investment in teacher leaders, systems will need to support teacher leaders in the following ways:

- *School Design:* School leaders must be able to create school schedules and assign teacher teams to enable sufficient collaborative planning time and balanced team assignments. We are learning that this requires active support of principals and, often, changes to the assignment or time allocation rules. In addition, providing scheduling templates and support in using them can help school leaders create sufficient time with the right teams.

- *Team Leader Expertise:* Teacher leaders must have strong content knowledge, know how to interpret data, and productively manage meetings and peers to focus on results.

- *Data/Reporting for Team Assignment and Team Data Analysis:* School leaders need systems that provide information on teacher expertise and results to support them in assembling balanced teams and providing appropriate support. Successful teams and teacher leaders need systems that allow access to data in real time.[28]

School systems that have high numbers of very small schools that have only one or two teachers per grade face added challenges to creating effective teams and providing cost-effective support. DC faces this challenge and has been actively working to close subscale schools.[29] It can be hard to find enough experts to lead each subject or grade level team. With so few teachers sharing content, teams have less opportunity to combine expertise, and conversations become more general and less content specific. Technology offers potential solutions here, enabling virtual coaching and cross-school collaboration.

Ways to Take Action

School systems can determine how conducive their conditions are for high-functioning teacher teams by visiting ERS' *Professional Growth & Support System Self-Assessment* tool, which poses questions specific to teacher leaders, teacher teams, and the availability of structures and supports that maximize their effectiveness.

In addition, there are several examples of highly effective teacher leadership and teaming structures in ERS' publication, *Promising Practices in Professional Growth & Support: Case Studies of Aspire, Teach Plus, Achievement First, and Agile Mind*, that include California-based CMO, Aspire Public Schools, and Teach Plus, a non-profit in Boston that recruits, develops, and places strong teacher team leaders in high-risk urban schools.

Whether a high-performing teacher seeks a leadership position or remains in the classroom full-time, his or her growth can be greatly facilitated by a well-articulated career path that is linked to compensation and performance individually and as a member of a team. The next section addresses the role of compensation and career path in Professional Growth & Support.

4. Support growth throughout a teacher's career by restructuring compensation and career path.

The Opportunity

Until this point, we have focused mostly on the direct professional growth and time provided by school systems that support "organizational improvement," serving collective needs and priorities. These organizational investments represent the bulk of spending.[30] But it makes sense for systems to pay attention to individual teacher needs as well. Providing opportunities to deepen or broaden expertise or address skill gaps at just the right point in a teacher's career can make a big difference in accelerating performance, keeping teachers invested in their careers, and growing their level of contribution.

Teachers at the same career stage have similar learning needs. These similarities offer school systems the opportunity to be systematic and cost-effective in addressing career-stage needs in a way that would be hard for individual schools. For example, new teachers might need to develop fundamental teaching skills like classroom management, while highly effective teachers might benefit from leadership development training to prepare them for roles as teacher leaders.

Though most school systems have some version of new teacher orientation and some have more extensive induction programs, few invest systematically at different career stages. "Lanes"—or raises given for completing additional coursework—typically represent the largest component of a system's investment in individual growth, despite the fact that education credits and additional degrees are found to have a minimal impact on teacher effectiveness, if any.[31]

School systems typically provide few formal opportunities for teacher leadership roles and they invest little to develop teacher leadership.[32] But, providing opportunities for the most effective teachers to extend their reach can encourage a teacher's professional growth, incentivize and reward performance, and increase the retention of the most effective teachers without requiring broad changes to compensation models.[33]

Additionally, giving effective teachers leadership roles extends their reach to more students and teachers and should have a significant effect on student performance. Research shows that children with highly effective teachers, those in the top 20–25%, demonstrate three times the learning as children with teachers in the bottom 20–25%.[34] Placing these teachers in leadership roles should compound those gains, because research shows that highly effective teachers who also serve in coaching roles can support more effective instruction among their peers.[35]

Findings

Spending on "lanes" represents the most significant investment to provide professional growth that matches individual career needs over time in all three school systems. Achievement First also invests significantly in customized individual career growth through coaches. All three systems are exploring how to shift resources to professional growth of teacher leaders.

Focusing first on the non-lane spending, **Figure 10** (below) quantifies the spending per teacher targeted to specific career stages or needs and continuing education opportunities available to all teachers. Each system invested in providing new teacher support, but invested very little at other career stages. Only AF invested significantly in other career stages through its ongoing observation feedback.

At AF, informal observation and feedback are embedded in the Teacher Career Pathway. The pathway is built along five stages of growth from Intern to Teacher 1, Teacher 2, Distinguished Teacher, and finally Master Teacher. Salary is commensurate with increased skill and contribution. In addition to increases in salary, other rewards include opportunities to collaborate with other expert teachers and network staff and to eventually self-direct their own professional development budget. The Teacher Career Pathway provides clear milestones and incentives to help teachers set goals, stay on track, and achieve higher capacity and performance.

AF Platinum, the talent management system, allows teachers and coaches to view student outcomes and survey data for each individual teacher. This provides close integration of AF's Teacher Career

FIGURE 10: INDIVIDUAL GROWTH SPENDING PER TEACHER (INCLUDING COST OF LANES)

Individual Growth Spend (with lanes) by Target						
	Career Stage/Need				Continuing Education	
	New Teachers *Cost per new teacher*	Struggling Teachers	Teacher Leaders	Recertification	All Teachers Continuing Ed	All Teachers Debrief
$ Per Teacher with Teacher Times						
Duval	$800	$0	$0	$0	$850 ($350)*	$10
DC	$1,300	$0	$0	$30	$7,600 ($1,350)*	$300
AF	$750	$0	$30	$0	$1,550 ($0)*	$750
Spending per teacher without including the cost of lanes.						

Note: The target of Individual Growth spending constitutes the teacher type that benefits from that spend, not the teacher type that delivers that Professional Growth activity.

Pathway with the Teaching Essentials rubric that guides observations and evaluations and survey and student assessment data. The merging of all this performance data determines where teachers are along the career path, priority areas for improvement, and the type of coaching, professional development, and support required. For additional detail on AF's career stages and a sample career-stage calculator, that connects career stages to AF's evaluation framework, see **Appendix F** (page 36).[36]

We turn now to explore spending on "lanes" to understand the reasoning behind reallocating this investment and to quantify the dollars potentially available for more productive uses. **Figure 11** (below) quantifies how much a top-performing teacher could make at the end of her/his career and the components of her/his salary. These three systems represent a range of approaches. Duval has the most traditional salary structure of the three systems studied. In Duval, a 30-year teacher who earned any possible bonus, took on the top-paying leadership job available to teachers, and attained the maximum number of credits could double her/his salary over the base. The vast majority of this increase accrued from adding longevity (years on the job) and education (for degrees and courses taken,) and less than 10% from responsibility and performance. This typical step-and-lane structure means that after 30 years, the most expert, high-impact teacher in the district could earn only 10% more than the average proficient teacher who takes on no additional responsibilities.[37]

DC was in the first phase of its compensation reform efforts in the year studied. DC has significantly increased earnings potential over a teaching career enabling top-performing teachers who take on the most challenging roles to earn nearly three times as much as the entering teacher. At this time, however, they still award increases for additional credits earned and this remains a significant opportunity for redistribution in future iterations. DC still provides increases for additional years of teaching but has introduced an important change. Teachers must be rated as "effective" (the middle

FIGURE 11: TOP TEACHER SALARY AT 30 YEARS AS A PERCENT OF STARTING SALARY

Duval: 204% (100% Base Salary, +6% Education, +89% Longevity, +8% Responsibility & Results)
DC: 281% (100% Base Salary, +56% Education, +68% Longevity, +57% Responsibility & Results)
Achievement First: 164% (100% Base Salary, +16% Education, +38% Longevity, +10% Responsibility & Results)

Y-axis: % of Starting Salary

Legend:
Responsibility & Results
Longevity
Education
Base Salary

rating level) to be awarded the annual increment. With increasing rigor in evaluation, this means an annual raise is no longer automatic. This is true at Achievement First as well. Achievement First had a much narrower range of salary growth available to teachers over a career. This reflects the fact that they have defined a host of academic leadership roles that combine teaching and professional growth roles and are no longer called "teachers."

Figure 12 (below) shows a breakdown of total compensation spending in each system split out by compensation component. The data reveal that systems have different levels of opportunity for redistribution depending on the specifics of their salary and benefits structure. Duval, with a relatively senior teaching force, devoted 58% of total teacher compensation spending to pay for base or starting salary. Benefits were 24% and 12% paid for years of teaching experience or longevity, and 1% contributed to higher salaries for education credits. In Duval, only 5% went toward paying teachers for assuming greater responsibility or for better student results. The story is similar in DC, except DC awards less to base salary and more to both longevity and education, resulting from DC's legacy step and lane structure. AF, which attempts to attract a strong corps of teachers with higher starting salaries, paid the most in base salary—66%. Responsibility accounted for only 3%, given that AF's relatively new teaching force had yet to transition into leadership positions. As Duval and DC look to find more resources to increase pay for teachers who contribute the most, dollars going to support education credits may provide an important source of resources for reallocation in the long term.

Constraints and Challenges

Reducing spending on education credits is no "quick fix." First, in traditional systems contracts will need to be renegotiated. Second, new resources come available slowly over time as teachers transition

FIGURE 12: COMPONENTS OF TOTAL SYSTEM SPENDING ON TEACHER COMPENSATION
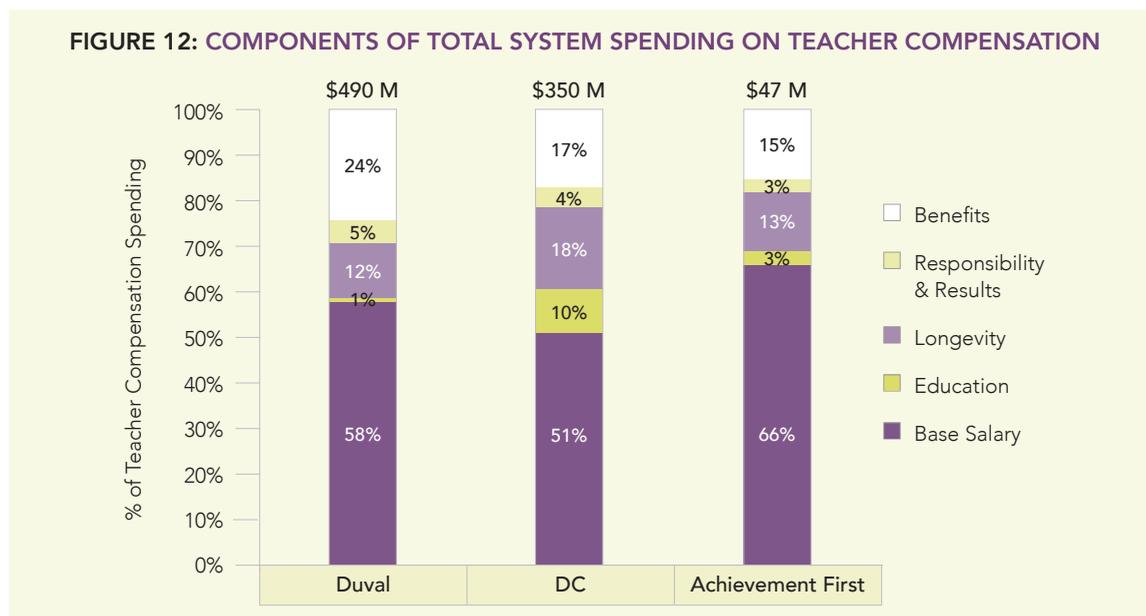
from the old salary schedule to the new one. Even if all teachers did move to a new salary structure, many would already have earned salary increments. This will be especially true in school systems that have a relatively senior teaching force.

Ways to Take Action

For school systems revising compensation to better reflect and incentivize responsibility and results, there is opportunity to rethink these structures. First, the *Professional Growth & Support Spending Calculator* helps systems understand where their current compensation dollars are going and where they might be shifted in order to more effectively encourage teacher growth and progress throughout their careers. Second, systems might analyze their current teacher value proposition, including compensation, and explore ways that revisions could support systems to attract, develop, retain, leverage, and reward highly effective teachers. ERS compensation tools, listed at the end of Section 6, can support leaders to engage in this exploration.

5. Add and optimize time to address organizational priorities as well as individual needs.

The Opportunity

Time is a prerequisite to a well-coordinated and powerful Professional Growth & Support system, whether the strategies involve introducing new curriculum related to the Common Core, interpreting student assessment data to improve practice in teams, or leveraging observation feedback to direct individual growth. Despite its importance, time for teacher development is a rare commodity, especially because creating more of it can seem to conflict with the important goal of extending student instructional time.

Findings

All three school systems already invest in non-instructional time for teachers, but they formally capture very different proportions of this time for collaboration and professional growth. AF teachers have 40% more defined work hours and spend more of this time participating in structured growth activities.
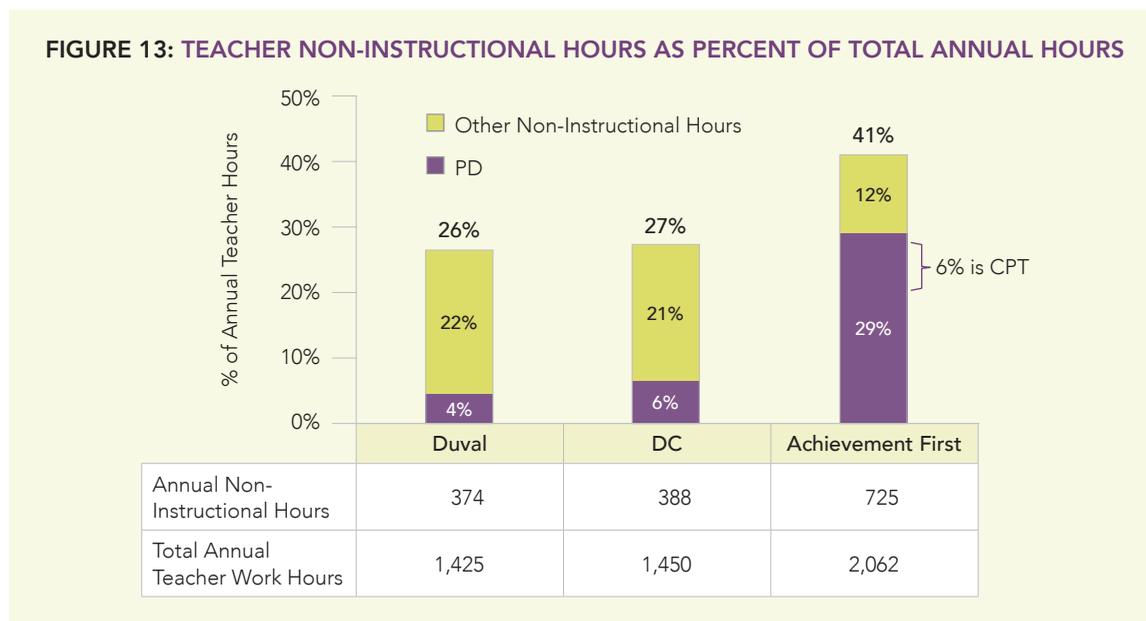
Figure 13 (page 27) shows that these systems designated between 26% and 41% of annual teacher work hours for non-instructional purposes. Non-instructional time includes all teacher work days in which students are not present, time free from instruction before and after school, and required time free from instruction during the school day (not including lunch). AF captured significantly more hours per year and allocated the majority of it to collaboration and professional growth efforts, with clear goals and network policies for the use of time outside of the classroom. Duval and DC, on the other hand, were only able to contractually designate less than 20% of their non-instructional time to professional development. The amount of planning time dedicated to grade or subject-based

collaborative planning in DC is largely left up to individual schools, resulting in inconsistent reliance on team-based collaboration as a lever for instructional improvement. Although the contractually specified time for professional development and collaborative planning has not changed in the three systems since ERS' analysis, DC has increased opportunities for teacher leaders to play team leader roles, making it easier to use available release time for teacher teaming and collaboration.

Like many charter schools and systems, AF has a longer teacher work day and year than many traditional districts, which enables much more flexibility in the organization and use of time. **Figure 14** (page 28) shows that much of the extra time for professional development occurred before or after the student school year and outside the instructional day. Further detail in **Appendix E** (page 35) shows the variety of ways that AF used the time for team-based improvement during data days and Friday PD, as well as whole-faculty targeted activities occurring during summer and network days.
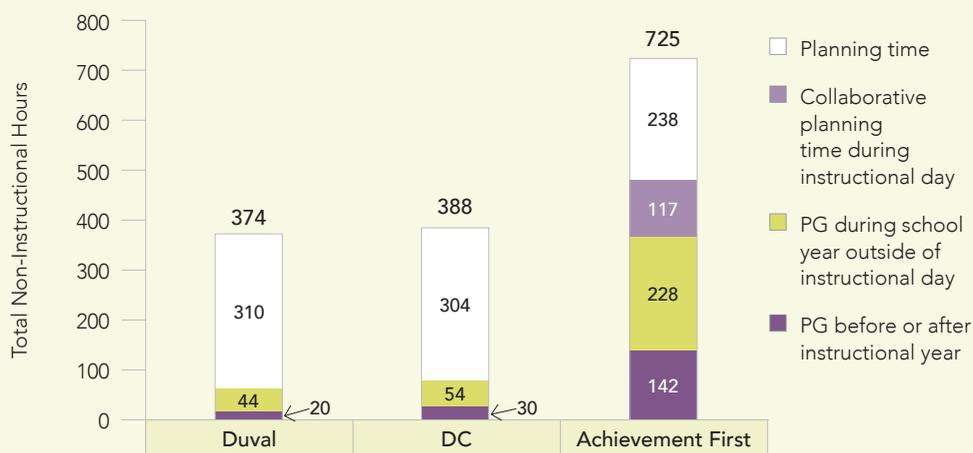
Constraints and Challenges

Policies which dictate the length of the school day and year and set seat-time requirements for academic subjects and electives crowd out the limited time available for professional development and growth. Collective bargaining agreements that place requirements on the number and specific use of minutes also severely limit the ability of school and system leaders to adjust time to more productive uses, even if the changes benefit students and teachers. Finally, the logistics of scheduling and staffing can be a barrier to freeing up not only time during the school day, but also the right combinations of staff to collaborate on interventions and changes to practice.

FIGURE 13: TEACHER NON-INSTRUCTIONAL HOURS AS PERCENT OF TOTAL ANNUAL HOURS

	Duval	DC	Achievement First
Annual Non-Instructional Hours	374	388	725
Total Annual Teacher Work Hours	1,425	1,450	2,062

FIGURE 14: ALLOCATION OF PROFESSIONAL GROWTH HOURS

These systems formally allocate time in different ways

Total Non-Instructional Hours

	Duval	DC	Achievement First
Total	374	388	725
Planning time	310	304	238
Collaborative planning time during instructional day			117
PG during school year outside of instructional day	44	54	228
PG before or after instructional year	20	30	142

Legend:
- ☐ Planning time
- Collaborative planning time during instructional day
- PG during school year outside of instructional day
- PG before or after instructional year

Ways to Take Action

Opportunities exist for systems to redirect often sizeable release time and, like AF, target more resources toward organizational and individual teacher growth. School systems can begin by quantifying the total time currently allocated to instruction and non-instruction. ERS' *Professional Growth & Support Spending Calculator* and *School Design: Leveraging Talent, Time, and Money* from the ERS' *Practical Tools for District Transformation* are places to get started.

6. Overhaul legacy policies and contracts and make strategic trade-offs.

The Opportunity

It's impossible to make the right trade-offs without first defining a strategy. System leaders must begin by assessing their teaching effectiveness across their schools and defining a system level strategy that fits the local context. Their strategies will vary according to the specific needs of the student body, the skills of the current teaching force, the capacity of school and system leadership, and the particular reforms already underway. For some systems this may mean providing significant coaching support to implement robust curriculum while supporting a corps of inexperienced teachers. For others the priority may be to invest in data systems that analyze student needs in real time or to schedule more time to work with colleagues on daily content challenges. A key step in this strategy definition will be to choose which teaching effectiveness levers to pull at the system level and which will be devolved to the school level.

Next, school systems need to align their resources to match this strategy—a seemingly obvious, but often-missed step. Defining the universe of Professional Growth & Support resources in the holistic

way presented here gives leaders a larger set of investments to consider and potentially reconfigure. This means prioritizing the most important investments and eliminating spending that doesn't fit or does not yield improvement. It is this ability to prioritize resources that has enabled Achievement First, a system with funding comparable to surrounding districts, to devote proportionally more to Professional Growth & Support.

Constraints and Challenges

In traditional school systems, reallocating significant chunks of resources from one use to another can take several years and much planning because unproductive resources are locked up in rigid contracts and staff positions that take time and political will to change. In addition, investing to adopt new practices and systems requires finding transition resources that may go beyond on-going operating expenses.

First, contracts and regulations limit nimble reallocation and expansion of time and compensation spending. For example, although DC's sizeable spending on lanes in 2011–2012 was not optimal with regard to research on maximizing teaching effectiveness,[38] changing this allocation of resources requires changing the salary schedule and negotiating new contract provisions. Even with a new contract, the current teacher workforce would likely continue to receive its previously earned raises associated with earned credits. Looking at the long term, DC leaders and their union are currently refining IMPACT, its teacher evaluation rubric, expanding career opportunities and fine-tuning compensation to shift resources from earned credits into paying for teacher results as well as teacher leadership roles. Similarly, teacher work days and the structure of teaching time in traditional systems are often strictly regulated by contracts and the state making it difficult to quickly reallocate time toward professional growth priorities.

Second, the fact that school systems allocate the vast majority of professional growth spending to pay for staff also presents a challenge to finding new resources in the short term. **Figure 15** (page 30) shows that all three systems devote at least 70% of their spending to pay for staff positions, which are difficult to repurpose without changing current jobs and numbers of staff. In many school systems, the individuals that hold these jobs have job security protected either through contract or state law as in New York State. If the system chose to eliminate this position, former teachers who have seniority might have access to teaching jobs, displacing more junior teachers. Even if the school system needed staff, the new vision could require new skills which may not fit the current skill profiles of existing staff. To transform the system strategy would require a long-term personnel plan as well as transition resources while the school system worked to free staff positions.

Ways to Take Action

The fact that it will be challenging for traditional districts to reallocate resources cannot be an excuse for inaction. It does intensify the need for system leaders to describe a compelling vision, identify the constraints, and reallocate resources to achieve it. ERS has created several tools designed to help school systems understand possible resource trade-offs within and beyond Professional Growth & Support.

FIGURE 15: TOTAL DIRECT PROFESSIONAL GROWTH SPENDING BY SPEND TYPE

	Duval	DC	Achievement
Staff Comp	72%	75%	71%
Vendor	12%	21%*	1%
Substitute Teachers	10%	0%	0%
Materials & Supplies	2%	0%	1%
Teacher Comp	4%	2%	8%
Conferences/Travel	1%	2%	4%
Other	0%	0%	14%**

* *Most of the vendor expenditure paid for initial start-up of an online teacher PD platform.*

** *Achievement First budgeted 14% of its Direct PD funding directly to schools to be spent at school leaders' discretion; due to the timing of data collection we were unable to determine the nature of this spend.*

- *Resource Check:* an online self-assessment tool that school system leaders can use to measure current resource use relative to best practices, highlighting areas for further exploration.

- *School Budget Hold'em:* a game that introduces possible resource opportunities and savings across key spending areas—from teaching to operations to funding and more.

- *DREAM:* This web-based tool called the "District Resource Allocation Modeler" enables high-level modeling of the budget implications of different choices and supports the user or groups of users to consider costs and trade-offs.

- *ERS' Practical Guides for District Transformation:* a review of the spending misalignments and opportunities to reallocate resources with regard to:

  - *School Funding Systems:* Equity, Transparency, Flexibility
  - *The Teaching Job:* Restructuring for Effectiveness
  - *School Design:* Leveraging Time, Talent, and Money
  - *School Turnaround:* District Strategies for Success and Sustainability

- ERS' compensation resources include a series of publications and tools to help school systems rethink compensation and career paths.

  - *Teacher Compensation Workshop*
  - *Rethinking the Value Proposition to Improve Teaching Effectiveness*
  - *Strategic Design of Teacher Compensation*
  - *Misfit Structures & Lost Opportunities*

Conclusion

As this snapshot in time reveals, we can expect a huge demand for increased investment in professional growth along with rapid innovation in ways to facilitate adult learning. To pay for it, school systems will need to first identify spending that does not support their overall strategy for improvement and then be rigorous in measuring the costs and outcomes of different approaches. They will need help to do this. For example, it's relatively easy to calculate the cost of adding 30 hours of teacher time for professional development. But, it's much harder to understand how this time was used and whether it included those additional investments most likely to improve teacher practice and student results.

We have argued here for a new understanding of the school system role in Professional Growth & Support. For school systems to play this role, we need stop thinking of "delivering" new knowledge and instructional strategies to teachers like "pellets of professional development." Instead, the primary role of systems must be to help schools create organizations where adults learn along with children. This means supporting them to distribute expertise, create school schedules, structure teacher compensation and career path, and acquire new knowledge to ensure consistent high levels of student performance and continuous improvement.

ERS

Education Resource Strategies | 480 Pleasant Street, Suite C–200 | Watertown, MA 02472 | Phone: 617.607.8000

ERS is a non-profit organization dedicated to helping urban school systems organize talent, time, and money to create great schools at scale. **For more information, see ERStrategies.org**

APPENDIX A:
EIGHT PRINCIPLES OF A STRATEGIC PROFESSIONAL GROWTH & SUPPORT SYSTEM

1. Integrates human capital, professional growth, and teaching support functions to support the school system's broader improvement strategy and context

2. Invests primarily in job-embedded teacher growth through school-based content experts, teacher leaders, and time for teacher teams

3. Links results of performance evaluations to opportunities for growth that are ongoing and occur at key career junctures

4. Supports growth throughout a teacher's career by restructuring compensation and career path

5. Organizes sufficient teacher time to meet both individual growth and organization needs

6. Differentiates investments based on school and educator needs and performance levels

7. Ensures accountability and continuous improvement by assigning responsibility and measuring impact

8. Pays for ongoing costs with sustainable funding and leverages external resources, partners, and technology to promote quality and efficiency

APPENDIX B:
SCHOOL SYSTEM BACKGROUND

	Duval	DC	Achievement First
# of students	120,818	44,107	7,028
# of schools	183	128	22
Grade span	PreK–12	PreK–12	Predominantly K–8; 3 HS
% FRL	55%	72%	78%
% ELL	3%	10%	<5%
$ per pupil	$7.6 K	$11.8 K	$11.6 K
# of teachers	7,901	3,445	615
Total Operating Budget	$917 M	$519 M	$82 M

Sources: http://www.duvalschools.org/static/aboutdcps/just_the_facts.asp, ERS analysis, http://www.achievementfirst.org.

APPENDIX C:
THE COMPONENTS OF PROFESSIONAL GROWTH & SUPPORT

Professional Growth & Support	Duval			DC			Achievement First		
	Per Pupil $	Per Teacher $	% of Operating Budget	Per Pupil $	Per Teacher $	% of Operating Budget	Per Pupil $	Per Teacher $	% of Operating Budget
Total PGS (Unadjusted)	$500	$8,800	7.2%	$2,100	$28,300	12.6%	$2,700	$31,100	16.3%
Total PGS (Adjusted)	$450	$7,900	7.0%	$1,400	$18,550	12.6%	$1,900	$21,700	16.3%
Direct PG	$300	$4,700	4.0%	$500	$6,550	4.3%	$400	$4,700	3.5%
Teacher Time	$100	$1,700	2.0%	$200	$2,600	1.9%	$1,150	$12,900	9.7%
Lanes	$30	$450	.4%	$500	$6,300	4.2%	$150	$1,550	1.2%
Curriculum	$50	$850	.7%	$100	$1,300	.9%	$30	$400	.3%
Evaluation	$3	$50	.04%	$80	$1,000	.7%	$90	$1,000	.8%
Assessment	$10	$150	.1%	$60	$800	.5%	$100	$1,150	.9%

APPENDIX D:
AF'S ESSENTIALS OF EFFECTIVE INSTRUCTION (BASIS FOR OBSERVATION RUBRIC)

1. *Great AIMS:* each lesson includes learning objectives that reflect high expectations and drive learning activities

2. *Exit Ticket/Assessment of Student Mastery of the AIMS:* teacher measures student mastery of the AIM(S) at the end of class with the goal of 85% of students reaching mastery

3. *Most Effective and Efficient Strategies to Teach the AIMS:* teacher demonstrates content knowledge and uses the most effective and efficient strategy to guide students to mastery; there is a sense of urgency and purpose in the classroom and the pace of instruction is brisk
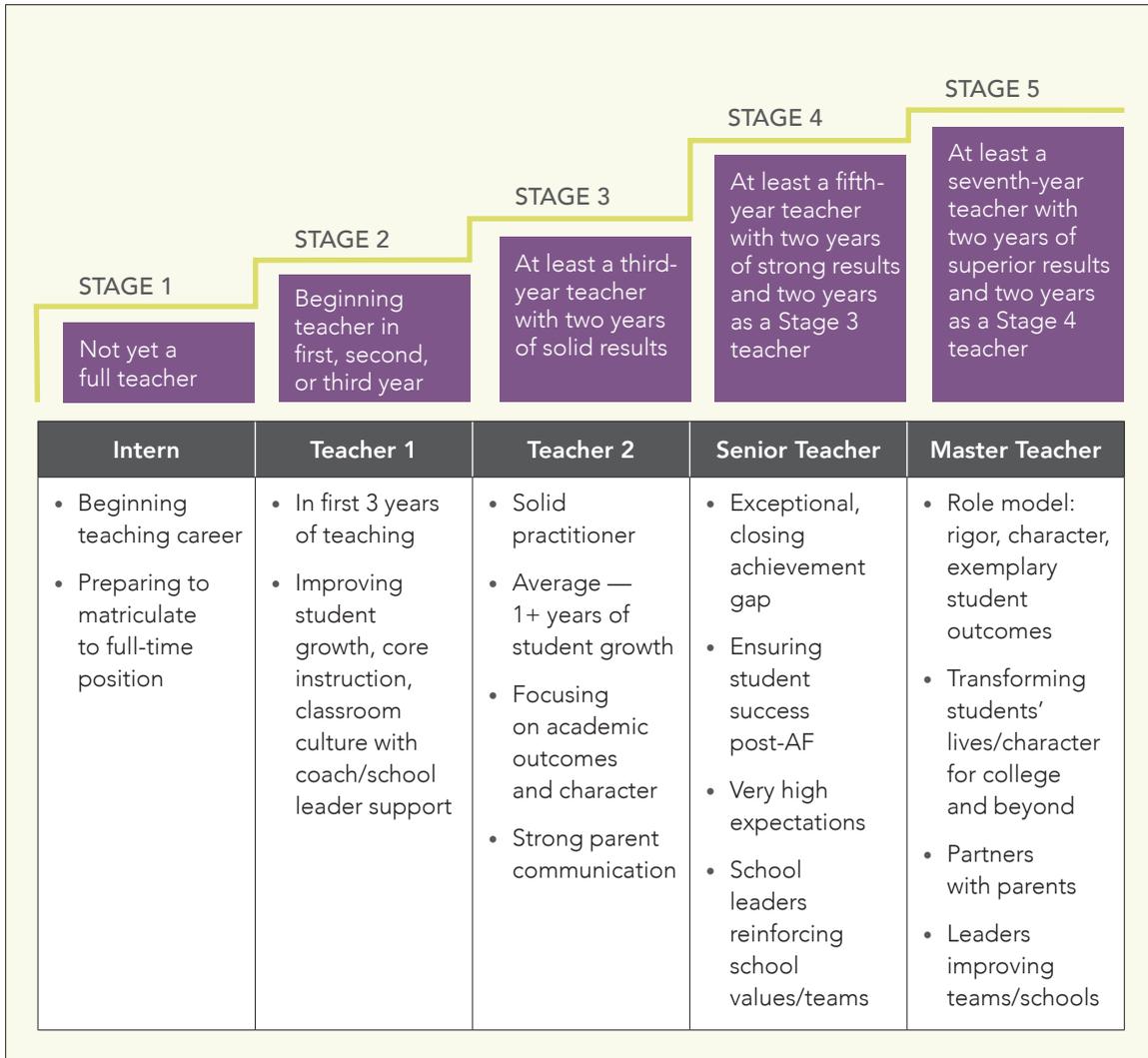
4. *Modeling/Guided Practice (I/We or We):* includes mini-lesson, guided practice, and checking for understanding

5. *Sustained, Successful, Independent Practice (You):* students have ample opportunities to practice

6. *Classroom Culture:* each classes demonstrates high expectations and clear routines; joy factor; the use of positive framing to correct behavior; students are given responsibilities, tools and strategies to fix problems they have created; and the teacher uses key moments in class to reinforce character skills

7. *Student Engagement:* teacher uses high-engagement strategies and insists on 100% students on task

8. *Academic Rigor:* students do most of the talking and working; teacher employs planned, rigorous questioning and pushes for top-quality oral responses and student work

9. *Cumulative Review:* students get opportunities to review and practice skills already mastered as part of lesson and homework routine

10. *Differentiation:* teacher works to ensure that the needs of every student are met, particularly during independent practice

APPENDIX E:
AF'S ANNUAL PROFESSIONAL GROWTH & SUPPORT SCHEDULE

	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Finalized scope & sequence		Weekly team/grade/subject collaborative planning									
Input assessment 1A–5A / State test results			1A		2A		3A		4A		5A
Teacher goal setting						Mid-year goals review					
					Teacher SAM & stage-advancement conversations		Student/parent surveys		Peer/principal/dean surveys		
				Round 1 observations			Round 2 observations				
New Teacher Induction →				Team data day 1		Team data day 2		Team data day 3		Team data day 4	
		Aug PD				Network PD day				Survey/observation debriefs	
		Friday afternoon PD									
		Weekly one-on-one coaching and observation feedback									

Legend: ☐ Curriculum ☐ Assessment ☐ Evaluation ☐ Professional Development

APPENDIX F:
AF'S CAREER STAGES AND COMPENSATION

STAGE 1
Not yet a full teacher

STAGE 2
Beginning teacher in first, second, or third year

STAGE 3
At least a third-year teacher with two years of solid results

STAGE 4
At least a fifth-year teacher with two years of strong results and two years as a Stage 3 teacher

STAGE 5
At least a seventh-year teacher with two years of superior results and two years as a Stage 4 teacher

Intern	Teacher 1	Teacher 2	Senior Teacher	Master Teacher
• Beginning teaching career • Preparing to matriculate to full-time position	• In first 3 years of teaching • Improving student growth, core instruction, classroom culture with coach/school leader support	• Solid practitioner • Average — 1+ years of student growth • Focusing on academic outcomes and character • Strong parent communication	• Exceptional, closing achievement gap • Ensuring student success post-AF • Very high expectations • School leaders reinforcing school values/teams	• Role model: rigor, character, exemplary student outcomes • Transforming students' lives/character for college and beyond • Partners with parents • Leaders improving teams/schools

Sources: Curtis, Rachel. (March 2011). Achievement First: Developing a Teacher Performance Management System that Recognizes Excellence. The Aspen Institute.

End Notes

1 Education Resource Strategies, is a non-profit organization that supports urban school system leaders to strategically organize talent, time, technology, and dollars to create great schools at scale.

2 Ash, Katie. (March 1, 2012). "Common Core Raises PD Opportunities, Questions." *Education Week;* Sawchuk, S. (April 25, 2012). "Concerns Abound Over Teachers' Preparedness for Standards." *Education Week.*

3 See Rivkin, S., Hanushek, E., & Kain, J. (2005). "Teachers, Schools, and Academic Achievement." *Econometrica*, 73(2), pp. 417–58, which shows the impact of strong instruction especially on low-income students. Also see Sanders, W. & Rivers, J. (November 1996). *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement.* Nashville: University of Tennessee Value-Added Research and Assessment Center, which provides compelling research that children who have an effective teacher for three years in a row dramatically outperform peers who have ineffective teachers for three consecutive years.

4 ERS distilled available research and our work with client partners into *Eight Principles of a Strategic Professional Growth System.* This list complements Figure 1 (page 4) and can be found in Appendix A (page 32). The following research helped to inform ERS' Eight Principles:

American Education Research Association. (2005). Teaching Teachers: Professional Development to Improve Student Achievement. *Research Points* (3)1; Blank, R. and de las Alas, N. (2009). *Effects of Teacher Professional Development Gains in Student Achievement: How Meta Analysis Provides Evidence Useful to Education Leaders.* Washington, DC: The Council of Chief State School Officers; Goe, L., Biggers, K. & Croft, A. (2012). *Linking Teacher Evaluation to Professional Development: Focusing on Improving Teaching and Learning.* Research & Policy Brief. Chicago, IL: National Comprehensive Center for Teaching Quality; Jacquith, A., Mindich, D., Wei, R.C., and Darling-Hammond, L. (2010). *Teacher professional learning in the United States: Case studies of state policies and strategies.* Oxford, OH: Learning Forward; The Parthenon Group & The Bill & Melinda Gates Foundation. (September 2012). *Targeted Research on Users of iPD: Key Learnings;*

Race to the Top State Support Networks. (2012). *Reforming Teacher Professional Development: A Guide to State Education Agencies, Local Education Agencies, and Their Professional Development Partners.* Working Paper; Roschelle, J., Schechtman, N. et al. (2010). Integration of Technology, Curriculum, and Professional Development for Advancing Middle School Mathematics: Three Large Scale Studies. *American Education Research Journal.*

5 ERS is grateful to the following system leaders, who were instrumental in our data gathering and verification processes: Dawn Wilson, Executive Director of Professional Development and Karen Jones, Budget Manager, Duval County Public Schools; Brian Pick, Deputy Chief Academic Officer and Scott Thompson, Deputy Chief, Teacher Effectiveness Strategy, Washington, DC Public Schools; and Paige MacLean, Senior Director, Strategic Partnerships, Kurtis Indorf, Senior Director, Program Strategy and Design, Sara Keenan, VP, Leadership Development, Amber McKay, Senior Director, Data Strategy, Sarah Coon, Senior Director, Teacher Career Pathways, and Tracy Epp, Chief Academic Officer, Achievement First.

6 Education Resource Strategies. (June 2011). Duval County Public Schools Human Capital Working Session.

7 Killian, Joellen. (March 29, 2013). "Words that Fail Professional Learning." Learning Forward's PD Watch. *Education Week.*

8 Despite similar percentages, Duval spent fewer dollars per student and per teacher even when adjusting for Duval's cost of living, which is approximately 20% lower than DC's and AF's.

9 In addition to percent of budget, comparing per-pupil and per-teacher spending on professional growth offers insights into systems' priorities and return on investment. For example, similar per-pupil yet higher per-teacher spending could indicate a system's deliberate choice to reduce staff while increasing investment in teacher support and effectiveness.

10 Based on ERS analyses of district partners, a typical range of total professional development time is the equivalent of 6–20 days; however, charter systems with greater flexibility and more novice teaching forces can have as many as 60 days.

11 Hamilton, L. and Mackinnon, A. (Spring 2013). *Opportunity by Design. New High School Models for Student Success.* The Carnegie Corporation of New York.

12 Hamilton and Mackinnon. (Spring 2013)

13 Typical professional development efforts are often departmentalized and fragmented as discussed in Miles, K. (2002). *Rethinking District Professional Development Spending to Support School Improvement: Lessons from Comparative Spending Analysis.* Watertown, MA: Education Resource Strategies.

14 See www.achievementnetwork.org *and* www.wireless-generation.com

15 Goe, L., Biggers, K. & Croft, A. (May 2012). *Linking Teacher Evaluation to Professional Development; Focusing on Improving Teaching and Learning.* Washington, DC: The National Comprehensive Center for Teaching Quality.

16 MET Project (January 2013). *Feedback for Better Teaching: Nine Principles for Using Measures of Effective Teaching.* Bill & Melinda Gates Foundation.

17 DCPS. (Fall 2012). 2012–2013 IMPACT Changes for Educators. (PDF)

18 ERS. (2010). Fair Student Funding Summit: Conference Proceedings and Recommendations for Action. http://erstrategies.org/documents/pdf/Fair_Student_Funding_Summit.pdf.

19 Education Resource Strategies. (March 2013). *Turnaround Case Studies. Elevating Turnaround to a Systemic Level.* Watertown, MA.

20 Jerald, C. (January 2012). *Movin' It and Improvin' It! Using Both Educational Strategies to Increase Effectiveness.* Washington, DC: Center for American Progress.

21 Miles. (2002).

22 Hamilton and Mackinnon. (Spring 2013).

23 Croft, A. et. al. (2010). *Job-Embedded Professional Development: What it is, Who is Responsible, and How to Get it Done Well.* Washington, DC: National Comprehensive Center for Teacher Quality; AERA. (2005).

24 Coggshall, J., Rasmussen, et al. (2012). *Generating Teaching Effectiveness: The Role of Job-Embedded Professional Learning in Teacher Evaluation.* Research

& Policy Brief. Washington, DC: National Comprehensive Center for Teacher Quality; Miles, K. and Frank, S. (2008). *The Strategic School.* Thousand Oaks, CA: Corwin Press; Education Resource Strategies. (2008). *Teaching Quality: The First Priority.* Watertown, MA; Van Driel, J.H. and Berry, A. (2012). Focusing on Pedagogical Content Knowledge. *Educational Researcher.*

25 Leana, C. (2011). "The Missing Link in School Reform." *Stanford Social Innovation Review.* Fall 2011: pp. 30–35; The Parthenon Group & The Bill & Melinda Gates Foundation. (September 2012).

26 Kirabo Jackson, C. and Buregmann, E. (2009). *Teaching Students and Teaching Each Other: The Importance of Peer Learning for Teachers."* (Working Paper No. 15202). Cambridge, MA: National Bureau of Economic Research.; Miles & Frank. (2008); Hawley, W., ed. (2007). *The Keys to Effective Schools. Educational Reform as Continuous Improvement.* Thousand Oaks, CA: Corwin Press.

27 One-quarter of the teachers in Duval have 0–3 years of experience and are concentrated at the lowest-performing schools.

28 Education Resource Strategies. (2009). *Teaching Quality: The First Priority.* Watertown, MA; Suescom, M., Romer, T. & MacDonald, E. (December 2012). "Supporting Teacher Leaders." *JSD.* National Staff Development Council. 33(6).

29 Adapted from ERS analysis. DCPS. (July 2012). Human Capital Working Session.

30 ERS' analysis showed Organizational Improvement comprising 79% of Professional Growth & Support spending in Duval, 79% in DC, and 94% in AF. This emphasis on Organizational Improvement is also reviewed in Miles, K. (Summer 2003). "The Big Picture. District Strategy Primes the Canvas for School Improvement." *JSD.* National Staff Development Council. 24(3).

31 Goldhaber, D. (2012). *Teacher Pay Reforms: The Political Implications of Recent Research.* Seattle, WA: Center for Education Data and Research.

32 Education Resource Strategies. (2013). *Misfit Structures & Lost Opportunities. The Urgent Case for Restructuring Compensation and Career Paths.* Watertown, MA; Miles. (Summer 2003).

33 Hanushek, E. A., & Rivkin, S. G. (2007). Pay, working conditions, and teacher quality. *The future of children*, 17(1), pp. 69–86.

34 Hassel, B. (2011). *Seizing Opportunity at the Top: Policy Brief.* Chapel Hill, NC: Public Impact.

35 Blase, J., & Blase, J. (2006). *Teachers bringing out the best in teachers: A guide to peer consultation for administrators and teachers.* Thousand Oaks, CA: Corwin Press; Larner, M. (2004). *Pathways: Charting a course for professional learning.* Portsmouth, NH: Heinemann; Leana, C. (2011); Killion, J. & Harrison, C. (2006). *Taking the Lead: New Roles for Teachers and School-Based Coaches.* Oxford, OH: National Staff Development Council.

36 Achievement First. (2012–2013). AF Teacher Career Pathway. *School Leader Implementation Guidebook.* New Haven, CT

37 It is important to note, however, that the education component in AF applies only upon a teacher's entry, when a Master's degree commands a slightly higher salary.

38 Ozdemir, M. & Stevenson,W. (2010). "The Impact of Teachers' Advanced Degrees on Student Learning." *Human Capital in Boston Public Schools: Rethinking How to Attract, Develop and Retain Effective Teachers.* Washington, DC: National Council on Teaching Quality; Ehrenberg, R. & Brewer, D. (1994). "Do School and Teacher Characteristics Matter? Evidence from High School and Beyond." *Economics of Education Review* 13(1), pp. 1–17.