

LEARNING LEADERS
HENRICO COUNTY PUBLIC SCHOOLS

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FALL 2016

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CTAC's staff is comprised of nationally recognized executives, educators, policy makers, researchers and organizers who have extensive experience working with city, county and state agencies, educational institutions, federal legislative bodies, not-for-profit organizations, philanthropic institutions and the private sector.

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When Educators Learn, Students Learn

LEARNING LEADERS

HENRICO COUNTY PUBLIC SCHOOLS

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Credits

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Principal Study Author

Joan McRobbie

Contributing Authors

Allison Atteberry, Ph.D.
Barbara J. Helms, Ph.D.
Guodong Liang, Ph.D.
Zhaogang Qiao, Ph.D.
William J. Slotnik
James Wyckoff, Ph.D.

Study Team Members

Peggie L. Brown
Judith A. Clary, Ph.D.
William Eglinton
Judy Finkel, Ed.D.
Joseph P. Frey
Geraldine Harge, Ed.D.
Elizabeth Larrabee
Richard Larrabee
Sylvia Saavedra-Keber

Report Reviewers

Natalie Nier
Martin Orland, Ph.D.

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Executive Summary

This study reports on findings from the Community Training and Assistance Center's (CTAC) evaluation of Learning Leaders, a \$16.5 million, five-year initiative supported by the U.S. Department of Education's Teacher Incentive Fund (TIF) program. Learning Leaders was designed to improve student achievement in eight high-need schools in Henrico County, Virginia by focusing squarely on building instructional capacity. Spanning school years 2010-11 to 2014-15, the initiative supported, evaluated, and rewarded educators for implementing professional teaching standards and for student achievement growth.

Developed with extensive input from teachers and principals, the initiative focused on longstanding concerns about the socioeconomic achievement gap in the 51,000-student Henrico County Public Schools (HCPS) and the high rate of teacher turnover in the division's high-need schools. The eight schools were chosen based on high levels of poverty (more than 50% of students from low-income families), low student achievement, and high teacher attrition in areas of mathematics, science, and special education.

Learning Leaders focused on three goals:

- building teacher and principal capacity to increase student achievement, via tailored support for actions that lead to effective teaching;
- retaining a community of high-performing educators to drive achievement in high-need schools; and
- developing the division's capacity to implement and evaluate a performance-based compensation system.

To achieve these goals, Learning Leaders incorporated three key components designed to work in concert:

- **Student learning targets.** Student learning targets are growth goals for each student that exceed the student's previous performance. For each student, teachers set targets for a year of academic growth based on their analysis of data from multiple assessments of past student performance. A cadre of Learning Leaders coaches—specially trained master teachers in each school—provided teachers with ongoing analytic and instructional planning support. Students' attainment of the targets partially determined educator incentive pay.

- **Observation process.** Learning Leaders enhanced the existing HCPS evaluation model by mapping its teaching standards to the Charlotte Danielson Framework for Teaching. The intent was to create focus on the subset of standards with the highest impact on student learning. Using a Learning Leaders-customized rubric that articulated levels of teacher effectiveness within each teaching domain, the observation process provided teachers with evidence-based instructional feedback and guided the design of customized professional development.

Administrators received training and ongoing support from an expert team that shadowed and coached them as they observed, documented, and scored teacher practice. Evaluation outcomes determined another portion of educator incentive pay.

- **Customized professional development.** Ongoing analysis of student learning data, in combination with teacher observation data, were used to design tailored professional development provided by the Learning Leaders Professional Development Academy and also by the Learning Leaders coaches.

The initiative's performance compensation system awarded teachers of core subjects up to \$8,000 annually based on attainment of learning targets for each student and on evaluation of classroom practice. It awarded administrators up to \$10,000 annually, based on the quality of teacher observations, the percentage of teachers supervised who met student learning targets, and the attainment of school-wide student achievement targets.

Findings

The evaluation's pivotal finding is that Learning Leaders did in fact improve student achievement. This was not because it stemmed teacher turnover; the initiative turned out not to be a defining factor in teacher retention. What it did do, however, was make student learning the driver and end result of an instructional improvement system that strengthened teacher, principal, and organizational effectiveness.

The initiative increased educators' capacity to bolster student learning. But most powerfully, it also changed the way of doing business in the participating schools, turning them into places more conducive to educator growth and improved student achievement. Measurable achievement gains resulted, in spite of high rates of teacher turnover.

Key findings include:

Learning Leaders improved student achievement in its targeted high-need schools.

Learning Leaders succeeded at boosting achievement in four core subjects in this set of schools with the highest needs and lowest test scores in HCPS.

CTAC's analysis looked at overall patterns of change in the Virginia Standards of Learning (SOL) state test scores both prior to and over the years of the initiative for each Learning Leaders school. We also analyzed how changes in the scores for Learning Leaders schools compared with score changes in a set of comparison schools.

Learning Leaders' scores increased in all four subjects. The opposite happened in comparison schools.

Ultimately, the analysis was based on SOL scores in grades 3-8 (high schools not included) in four of five tested subjects.¹ (English language arts, mathematics, science, and history) over eight years: pre-Learning Leaders—2007-08 to 2009-10; and post-Learning Leaders—2010-11 to 2014-15. We used two analytic methods: (1) a description of changes in SOL scores over time; and (2) Difference-in-Differences (DiD) analyses. In both methods, the idea is to compare SOL changes over time in seven Learning Leaders schools versus changes over time in 14 comparison schools.

Findings showed that:

- On average, scores increased in Learning Leaders schools in all four subjects from the pre- to post-Learning Leaders periods. The opposite occurred in comparison schools where scores in all four subjects declined. It is important to note that prior to the start of Learning Leaders, SOL scores in both sets of schools were lower than the division's average, but in the schools that would become Learning Leaders schools, scores were slightly more negative.
- The positive impact of Learning Leaders is statistically significant in science at the $p < 0.05$ level and in history at the $p < 0.10$ level.

By subject, Learning Leaders bolstered student achievement over the five-year period as follows:

- In science, compared with the comparison schools, Learning Leaders contributed approximately 5 to 8 additional months of student achievement growth.²
- In history, compared with the comparison schools, Learning Leaders contributed approximately 7 to 9 additional months of student achievement growth.
- In mathematics, compared with the comparison schools, Learning Leaders contributed approximately 2 to 5 additional months of student achievement growth.
- In English language arts, compared with the comparison schools, Learning Leaders contributed approximately 4 to 6 additional months of student achievement growth.

Learning Leaders was not a defining factor in teacher retention.

Teacher retention remained unaffected by Learning Leaders. While disappointing to the initiative's leadership, this finding also means that the initiative resulted in improved student achievement in spite of continued high teacher turnover. In short, the initiative aimed to retain teachers to get better student results but got better results even though it did not retain teachers.

Learning Leaders aimed to retain teachers to get better results but got better results even though it did not retain teachers.

CTAC analyzed teacher retention data descriptively, in terms of changes in teacher turnover over time, as well as comparing the “Difference-in-Differences” in rates of teacher departures over time in Learning Leaders versus comparison schools. The key finding was that the rate of teachers exiting the division as well as rate of teacher transfers to other HCPS schools were unchanged by the initiative. Annual fluctuations in both rates occurred over the course of the initiative. But those were similar in the comparison schools and also similar to fluctuations that occurred in both sets of schools in the pre-Learning Leaders period.

Learning Leaders strengthened teacher, principal, and organizational effectiveness.

What mattered most for improving student achievement was Learning Leaders’ emphasis on building capacity. Embedded in the initiative were layers of motivation and support—for teachers to improve their skills at analyzing each student’s learning needs and differentiating instructional strategies to meet those needs; for administrators to improve their skills at accurately evaluating teacher practice and helping teachers grow instructionally.

In interviews and surveys, many teachers, principals, and central instructional leaders reported that each initiative component had a significant impact in terms of strengthening teacher and administrator effectiveness. But interviewees cited the combined power of the three components as the key to improved student achievement in spite of high teacher turnover.

Learning Leaders schools became places characterized by educator growth and improved student achievement.

The components working in tandem literally changed the way schools did business. Whole staffs worked together with an intense instructional focus, used effective processes consistently year after year, and continuously monitored their progress. As a result, the Learning Leaders schools became places characterized by teacher and principal growth and improved student achievement.

Taken separately, each component had an impact as follows:

- **Student learning targets.** Educators overwhelmingly agreed that student learning targets individualize instruction and motivate teachers and students. By forcing teachers to focus on each student’s learning needs—with coaching help to do so—the target setting process deepened efforts to use data analysis to inform instruction. Teachers engaged in more reflective conversations about differentiating instructional strategies to meet each student’s needs. They also found it motivating to be recognized for each student’s growth, rather than only for absolute proficiency. And students who knew their own targets had goals to strive for.
- **The observation process** focused schools around common instructional goals and supported deeper, more frequent instructional conversations between principals and teachers. The teacher observation rubrics made instructional goals clearer and more meaningful. They quickly created what one principal called “almost a paradigm shift in how instruction is delivered.” The key to impact, however, was the expert team of retired administrators

specifically assigned to help principals develop the skills to differentiate between basic, proficient, and distinguished classroom practice and to help teachers improve.

- **Customized professional development** by way of the Professional Development Academy built teachers' knowledge and skills in areas of instructional need and built principals' skills at classroom observation and instructional coaching. Meanwhile, the Learning Leaders coaches supported teachers with data analysis and reflection for setting student learning targets. Having a knowledgeable, non-evaluative peer as an at-the-ready resource at each school also made a larger difference: the coaches helped change the school culture by promoting collaboration and a sense of the school as a learning community.

Taken together, the components improved the environment for teaching and learning by creating:

- **An intense focus on instructional priorities.** All parties, from the classroom to the boardroom, reported an awareness of school teams coming together around a specific instructional focus. Many principals and teachers especially noted that a school-wide focus on particular rubric domains helped whole staffs improve classroom practice. In addition, having student learning targets prompted another critical kind of focus—on individual student growth.
- **Five consistent years of effective processes and high quality support.** Many site educators and central instructional leaders who found the student learning targets and observation processes effective also said that the multi-year consistency in using those processes was critical. Principals and teachers felt that they could invest themselves in improving their knowledge and skills on specific rubric domains because they could count on year-to-year stability from the observation and feedback structures and the approach to analysis of student data. Many credited the Learning Leaders coaches with sustaining consistent implementation in the face of teacher and administrator turnover.
- **A norm of continual progress monitoring.** Educators valued Learning Leaders' push for ongoing, data-based monitoring of effectiveness. Many cited the initiative's focus on ongoing reflection ("How are we doing?" "How am I doing?") with promoting a norm of collaboration and mutual accountability—elements essential for continuous improvement.

Impact of performance-based compensation. Because talking about compensation gets people's attention, performance-based compensation helped system leaders push for changes such as alignment of efforts across central office departments in support of the initiative—changes that improved how business is done at the division level.

From the perspective of individual educators, performance-based compensation brought gratification at being recognized for effective efforts in very difficult jobs. That's different from saying that the money prompted people to work harder, an unpopular implication. While the chance to earn a bonus may have attracted some teachers or nudged some mediocre teachers to improve, few HCPS educators saw rewards for performance as motivational. They felt that the challenges of the job require intrinsic motivation. Bonus pay was welcome appreciation.

The up-front decision to restrict eligibility to teachers of core subjects was one that initiative leaders regretted and would opt to change in hindsight. It engendered resentment among those left out. Expanding eligibility mid-course was not financially feasible, but the Learning Leaders Director was able to ensure that all teachers had access to the initiative's professional development and coaching.

Persistence through challenges. As with all reforms, Learning Leaders faced numerous implementation challenges. For example, teachers initially felt overburdened and struggled with the student learning targets process, which was evolving as it was implemented. In the second year, morale slumped division-wide due to recession-related budget cuts. Moreover, although administrators embraced the new observation process, they struggled to find time to conduct all required observations.

Adjustments that made a difference included shifting the focus of the Learning Leaders coaches specifically to supporting teachers with setting targets and expanding their capacity—individually and collaboratively—to more deeply analyze student data. Administrators' time problem was eased by having retired administrators and administrative interns handle some of the observations.

By all accounts, the initiative gained ballast throughout from a style of initiative leadership that emphasized transparency and responsiveness, with an attitude of “we’re all learning together.” Because front line educators felt respected and listened to, they were willing to stick with it despite steep learning curves, implementation glitches, and a greater workload. But the factor that most inspired perseverance was early evidence of a positive impact on instruction and learning.

Implications for improving achievement in high-need schools

The Learning Leaders initiative demonstrates that improvements in instruction and student achievement in high-need schools are correlated with:

- An improvement approach driven by capacity building, not accountability.
- An inclusive rather than top-down approach to reform.
- A clear and shared vision, across schools, of effective instruction.
- Sustained implementation of high quality processes that promote reflective practice.
- Individualized support for principals to be effective instructional leaders.
- Classroom embedded feedback and coaching to help teachers improve instruction and become more reflective practitioners.
- A consistent improvement approach across a set of schools combined with a faculty-determined instructional focus at each school.
- Rigorous use of data to inform and individualize instruction, monitor progress, and continuously improve practice.

CHAPTER I

Learning Leaders: Context and Overview

Learning Leaders, a \$16.5 million, five-year initiative supported by the U.S. Department of Education's Teacher Incentive Fund (TIF) program, was designed to improve student achievement in eight high-need schools in Henrico County, Virginia by focusing squarely on building instructional capacity. Spanning school years 2010-11 to 2014-15, the initiative supported, evaluated, and rewarded educators for implementing professional teaching standards and for student achievement growth.

Context. Located in the Metro-Richmond area, Henrico County Public Schools (HCPS) is the sixth largest school division in Virginia, serving 50,971 students in 72 schools. By 2008-09, after a decade of residential and commercial growth in the county, HCPS enrollment had grown 20%. Diversity in terms of students' ethnic and racial composition had also grown. By 2009, the majority of HCPS students (55%) were non-Caucasian: 36.9% were African American; 6.5% were Asian; 4.9% were Hispanic; and 6.1% were mixed or unknown. Approximately 8% of students were English language learners.

Of major concern to HCPS leaders was the widening socioeconomic achievement gap in the division. Student achievement in the county's largely

low-income east end increasingly lagged behind that in the more affluent west end, which is also much less diverse. In 2009-10, the east end included census tracts that were more disadvantaged than 70% to 80% of communities nationwide and more than twice as disadvantaged as communities in the county's west end.³ In addition to the achievement gap, HCPS leaders faced a companion problem shared with similar districts nationwide: a persistent difficulty attracting and retaining effective teachers in the high poverty schools.

To address these urgencies, the Superintendent convened a committee of division leaders to determine the root causes of these patterns in achievement and teacher retention and to develop a plan for how HCPS would take action. Over more than a year, the committee analyzed data and information, including extensive input from teachers and principals gathered via surveys and focus groups. Based on those findings, HCPS leaders designed and developed the Learning Leaders initiative.

Overview of Learning Leaders. Under the TIF program, a key criterion for Learning Leaders' eligibility was that more than 50% of a school's students qualify for the federal Free or Reduced Price Lunch (FRPL) program. Of those that met these criteria within the division's 72 schools, eight schools were chosen to participate in Learning Leaders. These eight—five elementary schools, two middle schools, and one high school—had had the lowest student achievement among those eligible (see Table I.1) as well as high numbers of inexperienced teachers. For example, in Learning Leaders schools, 48% of teachers of core subjects were on probationary contracts compared with 34% in the other TIF-eligible schools and 28% in the division's non-TIF-eligible schools.

TABLE I.1

Comparison of Pass Rates on Virginia Standards of Learning (SOL), 2008-09

	Reading Pass Rate	Math Pass Rate	Science Pass Rate	History Pass Rate
Learning Leaders Schools	78%	70%	79%	79%
Other HCPS Schools	93%	89%	94%	94%
Difference	-15%	-19%	-15%	-15%

The total enrollment in Learning Leaders schools was approximately 11% of HCPS's 51,000 students. Fourteen of the other TIF-eligible schools served as comparison schools for CTAC's evaluation of Learning Leaders. (See Chapter II for more detail, including the list of Learning Leaders and comparison schools.)

HCPS leaders made two key decisions up front. First, they determined that teachers eligible to participate in Learning Leaders, including in performance-based compensation, would be those teaching core classes where standardized assessments are administered that can measure student achievement and growth. (See Appendix, "Table of Assessments Used for Student Learning Targets by Content Area.")

Second, because HCPS had done so much preliminary legwork, division leaders decided to forego the planning year normally built into TIF initiatives. Instead, they went directly into implementation in 2010-11. This decision offered the advantage of potentially accomplishing more in five years toward

HCPS's goals of system change in support of teaching and learning. At the same time, it created the significant challenge of quickly engaging key stakeholders in understanding and enacting Learning Leaders, even as the sometimes complex specifics of the initiative's components were still being worked out.

The initiative was overseen by a Management Team whose role was to shape further initiative development and implementation and to cut through issues of turf and jurisdiction to help ensure substantive and extensive impact. The team also oversaw and supported the work of the Learning Leaders Director, a highly regarded Henrico veteran educator and professional development leader.

The Management Team purposefully included the highest-level decision-makers in the school system, thus sending a clear message to all stakeholders about the importance of Learning Leaders. Its members were: the Superintendent; the Assistant Superintendent of Finance; the Executive Director of Secondary Education; the Director of Human Resources; the President of the Henrico Education Association and two active association members (representing current teachers); one Learning Leaders secondary principal; and one Learning Leaders elementary principal.

The Management Team oversaw three work teams to develop, implement, and manage the initiative:

- The Instructional Team helped lead and shape the professional development activities of the Learning Leaders Professional Development (PD) Academy, the in-house structure developed to customize professional development to meet the professional growth needs of Learning Leaders teachers and administrators. It included the directors of elementary and secondary instruction (who supervise the principals and other administrators) as well as curriculum and instructional specialists and the specialist for leadership development. The Learning Leaders Director led this team.
- The Data Management Team supported staffs in Learning Leaders schools to develop student and school-wide growth targets by providing teachers with data on each student's assessment performance history and providing principals with school-wide assessment data, all in usable forms and formats. The team also verified and documented achievement of growth targets. The data included results from state tests as well as other value-added growth assessments. (See Appendix.) The Director of Research and Planning led this team.
- The Communications Team helped plan and implement a system of two-way communication to ensure all stakeholders' understanding of Learning Leaders as well as ongoing channels for teacher and principal feedback. The Director of Communications and Public Relations led this team.

As Learning Leaders became established over time, its processes became so well integrated into the division that having a separate Management Team became redundant; oversight shifted to being part of the regular work of the division's K-12 Instructional Leadership Team.

Learning Leaders became so well integrated into the division that its oversight, once separate, became part of the regular work of the K-12 Instructional Leadership Team.

Learning Leaders Initiative Overview	
About	Supported by the federal Teacher Incentive Fund (TIF) program, Learning Leaders was a \$16.5 million, five-year initiative (2010-11 to 2014-15) in Henrico County Public Schools (HCPS) designed to improve student achievement in 8 high-need schools by building instructional capacity. It provided individual teachers and principals with performance-based compensation tied to effective instruction and achievement growth.
Eight participating schools	<p>5 elementary; 2 middle; 1 high school; approximately 5,700 students total (of approximately 51,000 division-wide). The 8 schools were selected from 23 TIF-eligible schools (of 72 schools, division-wide), based on high levels of poverty, low achievement, and high teacher attrition in math, science, and special education.</p> <p>HCPS demographics (as of 2009-10, the start of Learning Leaders): 45% White; 36.9% African American; 6.5% Asian; 4.9% Hispanic; 8% English language learners; 105 languages.</p>
Impetus	Growing concern about the division's socioeconomic achievement gap and high teacher turnover in high-need schools. A committee of division leaders spent a year examining root causes and getting extensive input from teachers and principals. Building on that feedback, HCPS developed Learning Leaders.
Goals/Approach	<p>Three key goals:</p> <ul style="list-style-type: none"> • Build teacher and principal capacity to increase student achievement, via tailored support for actions that lead to effective teaching. • Retain a community of high-performing educators to drive achievement in high-need schools. • Develop the division's capacity to implement and evaluate a performance-based compensation system.
Components	<p>Three key components:</p> <ul style="list-style-type: none"> • Student learning targets: Teachers used their analysis of each student's past performance to set a year-end target for that student's growth. • Observation process: Assessed educator strengths and weaknesses in relation to the HCPS professional standards and annual goals. • Professional development (PD): The Learning Leaders PD Academy customized PD to teacher needs as assessed by the observation process. Included on-site support from Learning Leaders coaches.
Performance-based compensation	<p>Individual teachers and principals were differentially compensated based on meeting professional standards and improving student achievement.</p> <p><i>Total possible teacher incentive compensation: \$8,000</i></p> <ul style="list-style-type: none"> • Up to \$3,000 for meeting professional standards and annual goals. • Up to \$5,000 for attaining learning goals for each student. <p><i>Total possible principal incentive compensation: \$10,000</i></p> <ul style="list-style-type: none"> • Up to \$4,000 for meeting targets for supporting teacher growth in implementation of professional standards and annual goals. • Up to \$3,000 if teachers supervised met learning targets for each student. • Up to \$3,000 for meeting identified school-wide student achievement targets.

Learning Leaders' goals. Building on the pre-initiative feedback from teachers and principals, the initiative was expressly created to:

- build teacher and principal capacity to increase student achievement, via tailored support for actions that lead to effective teaching;
- retain a community of high-performing educators to drive achievement in high-need schools; and
- develop the division's capacity to implement and evaluate a performance-based compensation system.

Components. To achieve these goals, Learning Leaders implemented three key components designed to work in concert as an instructional improvement system that would improve teaching practice and student learning. Annual performance goals were set for classroom practice and student growth, and the performance-based compensation system was structured to reward individual educators for effectiveness.

Learning Leaders' three key components were:

- student learning targets,
- the observation process, and
- professional development.

The design and implementation of each were as follows:

Student learning targets

Student learning targets are growth goals for each student that exceed the student's previous performance. Learning Leaders teachers set the targets by first analyzing each student's learning history, using three-to-four years of past assessment data. Their findings from that analysis, along with personal knowledge of each student, guided their projections for how much that student's performance would grow on state standardized assessments and, where possible, on value-added assessments. (See Appendix.) The use of more than one assessment was in keeping with the clear message from teacher and administrator focus groups that fairly demonstrating a teacher's contribution to student growth requires using multiple measures.

Teachers established and entered their targets into an electronic system each year between November 20 and December 20. During the target setting process, teachers worked with their administrator and were supported by the Learning Leaders coaches. The process recognized that certain circumstances outside of a teacher's control may affect a student's ability to meet targets—for example, excessive absences or loss of a parent or guardian. In such cases, the teacher could update that student's target(s).

Attainment of student growth targets was a significant determinant of each teacher's performance-based compensation. For a teacher to qualify for the learning target portion of incentive pay, each of the teacher's students had to attain at least one of the growth targets set for that student. For example,

each fourth grade student would need to attain at least one of the four targets set for each fourth grader—on the mathematics SOL; reading SOL; mathematics NWEA Measures of Progress (MAP); or reading MAP.

Attainment of student learning targets also determined part of administrators' performance-based compensation—further investing administrators in supporting the student learning targets process. A portion of each administrator's bonus was based on the average percentage of growth target attainment by the teachers assigned to that administrator. For example, if an administrator had four assigned teachers and two made 100% of their targets while two made 80%, the administrator would receive 90% of the incentive.

The initiative's approach to student learning targets became the model adopted for use division-wide.

Implementation challenges. Setting targets for student growth was new in Henrico. The launch of this process was far from easy, involving more complexity, effort, and stress than anticipated. As in many target setting efforts nationwide, teachers spoke of work overload. Moreover, the absence of a clear roadmap for analyzing student data for purposes of predicting student growth, coupled with the knowledge that attainment of targets would partly determine their incentive pay, raised teacher anxiety over how to set challenging yet realistic goals. The effort had teachers “tied up in knots,” as one teacher put it, because they wanted to “get it right.”

These challenges occurred at a time when morale in Henrico—as in school districts nationwide—had slumped due to the bad economy and budget cuts. In this environment, concerns arose that the extra work and frustration might undermine staff support for Learning Leaders.

Yet implementation occurred successfully, largely due to several factors that helped offset these negatives. For one, the Office of Research and Planning jumped in with what one principal called “phenomenal” support in terms of hearing people's concerns and quickly developing more user-friendly ways of organizing and formatting assessment data. As an example, the office eliminated a layer of work and confusion by developing a spreadsheet for each teacher pre-populated with every past test score for each of that teacher's students from third grade forward.

Another critical factor was the decision to immediately shift the focus of the Learning Leaders coaches to supporting teachers with the target setting process. Working with the Learning Leaders Director, the coaches became the resident experts on target setting. They helped site educators understand the target setting protocols—e.g., steps required for establishing targets; allowable assessments by content area and grade level; the relationship between attainment and levels of incentive pay. Crucially, they worked with teachers, individually and in grade-level teams, to enhance their capacity to analyze student data and to identify or perfect strategies or skills to support student growth.

In 2012-13 the state began requiring that a portion of all teachers' evaluations be based on student growth. In HCPS, that meant developing a target setting process for every school, not just Learning Leaders schools. This boosted Learning Leaders' staff morale; teachers no longer felt alone and put upon with an extra level of work. Rather, they felt ahead of the game, having already experienced a

year of implementing learning targets. Their “pilot” was adapted for use division-wide. And unlike teachers in other HCPS schools, Learning Leaders teachers had the advantages of support from their on-site coaches and bonuses for target attainment.

Perhaps most important for overcoming early hurdles was evidence of impact. Even before the initial difficulties with target setting subsided, interviews revealed a growing sense among principals, central instructional leaders, and teachers that Learning Leaders overall, including the student learning targets component, was having a noticeable, positive impact on instruction and student learning. (See Chapter IV.)

Observation process

The second key component of Learning Leaders was the teacher observation process. Its purpose was to continually improve teaching by making instructionally-focused dialogue and reflection between teachers and principals part of each school’s regular routine. Guided by standards-based rubrics, principals or other administrators observed teachers at specified intervals, providing feedback, support, and evaluation.

The observation process was anchored in the existing HCPS teaching standards.⁴ But because Learning Leaders aimed to create focus on the subset of standards likely to have the highest impact on student learning, initiative designers took those standards and mapped them to the Charlotte Danielson Framework for Teaching.⁵

Within each of Danielson’s instructional domains, Learning Leaders designers developed customized rubrics that guided the observations. The rubrics drew a portrait of teaching practice for each of four teacher performance levels (unsatisfactory, basic, proficient, distinguished). Because the rubrics allowed everyone to “see” the progression to excellence in each teaching domain, they provided two key building blocks for school-wide professional growth: a common vision of effective classroom practice and a common vocabulary for talking about instructional practice.

For teachers, the observation schedule annually included two formal (evaluative) and two informal observations, along with four to six unannounced walk-throughs. In post-observation conferences that followed the formal observations, administrators used findings from the observation to provide individual teachers with critical evaluative feedback.

Besides promoting reflection on practice, the observation data—combined with data from ongoing analyses of student learning—were used to design differentiated professional development for individual teachers and whole school staffs. The observation data also provided evidence to support each teacher’s observation scores, which determined a portion of his or her incentive pay.

All teachers and administrators received training on the observation process, including on the Danielson Framework and the rubrics and on how performance would be evaluated.

Administrators also received extensive observation training that emphasized observational rigor and inter-rater reliability. It included how to use the rubrics to observe, rate, and score teacher practice and how to use the initiative’s digital rubric tools. But a pivotal additional feature of Learning Leaders was the Administrator Evaluation and Support (AES) team, an expert team of three retired, Henrico

Learning Leaders recognized the crucial role of administrators' capacity to accurately judge and appropriately support teacher practice.

administrators. From the trainings—which the AES team provided with the Learning Leaders Director—principals and assistant principals understood the rubrics and how to use them. They knew the guiding questions to ask in post-observation conferences. But many also needed practice and guidance, the kind of support that the AES team's shadowing and feedback was designed to provide.

While all HCPS site administrators got broad-based support from the division's instructional directors, the creation of the AES team reflected the central importance to the initiative of building capacity among administrators to accurately judge and appropriately support teacher practice.

The team provided two rounds of observations: one in the fall, to help administrators get off on the right foot; the other in the spring, for formal evaluation purposes. In the interim, administrators could seek additional observations or coaching or use an AES team member as a sounding board—someone to consult, for example, about ways to help a struggling teacher.

As part of administrator evaluation, the AES team also reviewed and scored a random selection of observations on assigned teachers the administrator had completed as well as his or her post-observation reports, then submitted the results to the Learning Leaders Director. She discussed them with the instructional directors, who also signed off on the evaluations.

When turnover occurred, the team trained and coached the newly hired administrators. This was critical, since Learning Leaders' goal of having the most experienced, effective principals possible resulted in four of the eight schools experiencing at least one change in principal over the course of the initiative.

Implementation challenges. From the start, administrators praised the observation process. But as happens in many school districts nationally, some also struggled to complete all required walk-throughs and post-observation conferences. This was especially true for secondary school principals with large staffs.

This frustrated teachers as well as administrators. Teachers sympathized with principals' time squeeze, but voiced concerns about fairness, about missing full benefit of the feedback, and about the potential impact on their incentive pay.

Steps taken to help alleviate the problem included having administrative interns handle some observations. Those interns gained valuable experience, as did assistant principals who were doing three or four times the number of observations they would otherwise have done. But principals strongly advocated finding ways to revise the process to sustain the benefits while also avoiding administrator burnout.

The observation process also dealt with a frustrating technology management challenge. Early on, Learning Leaders had to change vendors for the system that handled the tracking of observation and evaluation data due to problems at the external company. The changeover was accomplished, but meant re-loading a year's worth of observation data, which created delays in making observation data available to teachers.

Professional development

Professional development customized to meet the specific instructional needs of individual teachers and school-wide staffs was the third key component of Learning Leaders. It went directly to the heart of the initiative: building administrators' capacity to help teachers and teachers' capacity to help students.

The initiative used findings from ongoing analysis of student learning and from the observation process to identify teachers' strengths and weaknesses, then design professional development opportunities accordingly.

The Learning Leaders Professional Development (PD) Academy was the structure within which formal trainings and professional development workshops took place. At the outset, the PD Academy provided overview training for all teachers and administrators—about the initiative's goals, purposes, and components. For each component, participants learned implementation details as well as what would be expected of teachers and administrators. They also learned about the differing kinds of support that would be provided to help individuals and school-wide teams improve their knowledge, skills, and effectiveness. Included was detailed information about performance-based compensation and how each educator's annual level of incentive pay would be determined.

Customized professional development and coaching built administrators' capacity to support teachers and teachers' capacity to support students.

In the course of the initiative, as school staffs began to focus on specific domains of the Danielson Framework, the PD Academy tailored its support to help teachers from different schools to master instructional strategies or particular kinds of knowledge or skills.

For example, in Years 2 and 3, selected high school teachers received professional development to hone their classroom management skills and strengthen their content knowledge. In Years 4 and 5, the staffs of two elementary schools received a year-long course of monthly professional development to learn concepts, strategies, and skills specific to teaching at-risk children from poverty. In Years 3, 4, and 5 all elementary, middle, and high school teachers received workshops in strategies that promote active student engagement, a rubric area that became an emphasis across all eight schools.

Coaching. Beyond the formal sessions of the PD Academy, administrators and teachers alike received informal professional development in the form of on-the-job coaching. For administrators, whose responsibility was teacher instructional support, coaching was provided by the three-person AES team—a resource unique to Learning Leaders.

The team's goal was to strengthen administrators' knowledge and skills about how best to work with teachers to improve classroom practice. As discussed above, team members shadowed principals and other administrators at the eight sites as they carried out teacher observations and post-observation conferences and offered teachers feedback, modeling, and mentoring. Team members were available to administrators throughout the school year for consultation and brainstorming.

Coaching for teachers was provided by a cadre of 11 teacher-coaches, one for each of the five elementary schools and two each for the middle and high schools. The coaching program had two goals: to improve classroom instruction and to improve the school-wide learning environment.

The coaches were identified by principals and trained and supported by the Learning Leaders Director. All coaches were full-time teachers in the Learning Leaders schools they served. Each had demonstrated effective, standards-driven classroom practice and garnered high levels of student achievement. Eligibility criteria also included being a master teacher with at least four years' teaching experience. Coaches provided 10 hours of assistance per month in their schools and earned a stipend based on an hourly rate.

Under the original plan, the coaches' role was to assist, coordinate, and mentor teachers, particularly in terms of improving their performance on the Danielson domains, components, and rubrics. However, when the launch of student learning targets turned out to be more complex and challenging than anticipated, the coaches' focus shifted to supporting teachers with setting and attaining the targets.

That shift gave teachers the benefit of having a knowledgeable, at-the-ready peer who could help them navigate the unfamiliar terrain of setting a growth target for each student, rather than for the class as a whole. As discussed previously, the coaches guided individual and grade-level teams through the deeper level of student data analysis required to set individual growth goals. Throughout each year, they helped teachers determine and use instructional strategies that would help students attain their goals. Importantly, because the coaches were non-evaluative, they enabled the kind of trust required for teachers to openly share less-than-stellar student data for collaborative analysis with colleagues. With coaches, teachers could also vent frustrations and gain encouragement from reminders that they were all learning together.

The coaching program was also a key form of recognition for highly accomplished teachers who are proven teacher leaders. This recognition of teacher leadership reflected a priority expressed by principals and teachers during the conceptualization and design of Learning Leaders.

Approach to performance-based compensation

The performance-based compensation system consisted of incentive bonuses aligned with the initiative's goals for teachers and principals.

Only teachers teaching core classes, where student achievement is measured by standardized assessments, were eligible to participate in the initiative and receive performance-based compensation. All Learning Leaders administrators participated.

Performance awards were structured as follows.

For teachers:

The total possible performance-based compensation award for teachers was \$8,000 annually. The policy decision about how much compensation to provide was based on findings from a pre-initiative survey wherein division leaders asked teachers what levels of bonus pay they believed would create meaningful incentives.

The teacher incentive was structured as follows:

- **Part 1: Student learning targets.** Teachers received up to \$5,000 for attaining learning targets for each student. Teachers received the full \$5,000 if they met 100% of their learning goals. Teachers who met learning goals for less than 100% of their students received a percentage of the bonus commensurate with their goal attainment. When goal attainment was less than 50%, there was no incentive compensation paid.
- **Part 2: Classroom observations.** Teachers received up to \$3,000 for meeting professional standards and annual goals. This portion was based on classroom practice and on implementation of selected Danielson Framework rubrics. At least two walk-throughs and at least two classroom observation scores determined a teacher's score.

For classroom practice, teacher effectiveness was defined as receiving a 100% score on the evaluation rubrics that were designed using the levels of performance described in the Danielson Framework (all scores are based on a 4-point rubric: 4=distinguished, 3=proficient, 2=basic, 1=unsatisfactory). Teachers received the percent of the incentive that matched the percent attained on their observation average, down to 50%. If a teacher's average was less than 50%, the teacher did not receive incentive compensation.

For school site administrators:

The total possible performance-based compensation for site administrators was \$10,000 annually, structured as follows:

- **Part 1: Student learning targets.** Administrators received up to \$3,000 if teachers they supervised met learning targets for each student. This was determined by the average percent of the assigned teachers' percent of attainment of at least one target per student from the teachers' documented student learning targets.
- **Part 2: Classroom observations and post-observation conferencing.** Administrators received up to \$4,000 for meeting targets for supporting teacher growth in implementation of professional standards and annual goals. This was based on the AES team's assessment of the administrator's ability to conduct a high quality post-observation conference using the language of reflection.

Administrator effectiveness was defined as receiving a 100% score on the evaluation rubrics that were designed using the levels of performance described in the Danielson Framework (all scores are based on a 4-point rubric: 4=distinguished, 3=proficient, 2=basic, 1=unsatisfactory). Administrators received the percent of the incentive that matched their percent attained down to 50%. If the administrator attained less than 50%, he or she received no incentive pay.

- **Part 3: School-wide goals.** Administrators received up to \$3,000 for meeting identified school-wide student achievement targets. School-wide goals were set by the school's instructional director, working with the administrative team at each school. Each school had a specific focus. For example, a school working on reading may have a goal of achieving an 80% proficiency rate on SOL reading scores, by implementing a focus on reading in the primary grades.

Management of performance-based compensation involved developing a data management system that would merge data from three different sources into a single spreadsheet for each teacher and administrator. That single record would show data on that educator's attainment of requirements for each part of the incentive along with the subsequent incentive pay.

The data sources to be integrated were: (1) the HCPS data warehouse and student information system, which housed student achievement data used to determine teacher attainment of student learning targets; (2) a repository of data from teacher and administrator observations and evaluation; and (3) the payroll system database, wherein teacher payroll records are stored.

Implementation challenges. HCPS ran into unanticipated delays in development of the new data management system, which was not fully in place until 2014. Its absence necessitated manually collecting, documenting, and analyzing many data points to calculate the learning targets portion of teacher bonus pay. This created an unexpected burden on the Learning Leaders Director who nonetheless met payroll deadlines.

CHAPTER II

Methods of Data Collection and Analysis

The Learning Leaders evaluation used a mixed-methods approach over all five years of the initiative, collecting qualitative and quantitative data relative to the eight Learning Leaders and 16 comparison schools in HCPS. The multiple data sources included: student achievement and teacher retention data; surveys of educators and parents; interviews and focus groups; and student learning targets/rubrics.

The selection of Learning Leaders and comparison schools

Under the federal Teacher Incentive Fund program, Learning Leaders' eligibility was based on high levels of poverty (more than 50% of students from low-income families), low student achievement, and high teacher attrition in areas of mathematics, science, and special education. Of those that met these criteria within the division's 72 schools, eight schools were chosen to participate in Learning Leaders. These eight—five elementary schools, two middle schools, and one high school—had had the lowest student achievement among those eligible as well as high numbers of inexperienced teachers.

The evaluation of Learning Leaders focused on the overarching question of whether Learning Leaders had a positive impact on student achievement. To answer that question required identifying a set of comparison schools that would allow for a strong inference of Learning Leaders' effect—that is, schools similar enough to the eight Learning Leaders schools to show, over time, how outcome variables in these schools would likely have looked in the absence of Learning Leaders.

Because the key analytic approach to examining Learning Leaders' effects was a Difference-in-Differences approach, it was important that the comparison schools have similar demographics and achievement levels at a moment in time and also show trends similar to those of the Learning Leaders schools in certain key variables. Those variables would include, for example, prior SOL scores and student socioeconomic status—in short, variables likely to be related to student outcomes such as SOL scores, even if the levels of these variables differed.

To select comparison elementary schools that resembled the Learning Leaders elementary schools as closely as possible, we used a propensity score matching technique. This statistical methodology was not feasible for middle and high schools due to the small number of schools and the differences among them in key variables. We therefore selected middle and high school comparison schools based on similar observable school characteristics.

This selection approach meant that the pool of potential comparison schools extended beyond the 23 TIF-eligible schools. In the end, we identified a total of 16 schools as comparison schools, some TIF-eligible, some not. They included 11 elementary schools, three middle schools, and two high schools.

TABLE II.1

Learning Leaders and Comparison Schools

Learning Leaders Schools	Comparison Schools	
Elementary Schools		
Jacob L. Adams	Crestview	R. C. Longan
Fair Oaks	Cashell Donahoe	Montrose
Glen Lea	Harvie	Harold Macon Ratcliffe
Highland Springs	Elizabeth Holladay	Sandston
Laburnum	Charles M. Johnson	Seven Pines
	Lakeside	
Middle Schools		
Fairfield	Brookland	John Rolfe
L. Douglas Wilder	Elko	
High Schools		
Highland Springs	Henrico	Varina

Characteristics of students and teachers in Learning Leaders and comparison schools

Students: Henrico is a large district with approximately 51,000 students, where—across the five years of the initiative—an average of 37% of the students were African American, 8% Asian, 7% Hispanic, 44% White, and 3% multi-racial. The proportion of students who come from economically-disadvantaged families rose steadily from 31.6% in 2010-11 to 40.2% in 2014-15. The proportion of English language learners remained fairly stable at 4.6% in 2010-11 to 5.5% in 2014-15.

The demographic characteristics of the students in the Learning Leaders and comparison schools across the years are detailed in Table II.2. The average enrollment of the eight Learning Leaders

schools is 5,763 with 84% African American students, 7.3% White, 4% Hispanic, and 2.6% multi-racial. Less than 1% are American Indian and Asian. The average enrollment of the 16 comparison schools is 11,534 with 57.1% African American students, 25.6% White, 9.1% Hispanic, and about 4% Asian and multi-racial. Less than 1% are American Indian.

The Learning Leaders initiative focused on schools with high percentages of economically-disadvantaged students as determined by federal Free and Reduced Price Lunch (FRPL) eligibility. On average, 70.6% of students in Learning Leaders schools qualified for FRPL while the average in comparison schools was 54.6%.

TABLE II.2

Student Characteristics by Year, Learning Leaders and Comparison Schools*

	2010-11		2011-12		2012-13		2013-14		2014-15	
	LL	COMP	LL	COMP	LL	COMP	LL	COMP	LL	COMP
Total Students	5,677	11,851	5,738	11,772	5,745	11,234	5,796	11,454	5,857	11,359
Ethnicity										
African American	85.8%	58.0%	79.8%	57.7%	84.0%	57.1%	84.7%	56.9%	85.1%	55.9%
American Indian**	0.4%	0.5%	0.4%	0.5%	0.4%	0.5%	0.3%	0.4%	0.4%	0.5%
Asian	0.9%	3.9%	0.9%	3.9%	0.9%	3.8%	0.9%	3.8%	0.8%	4.1%
Hispanic	3.4%	7.6%	4.0%	8.2%	4.2%	8.9%	4.2%	9.8%	4.2%	11.0%
Multi-Racial	2.3%	3.1%	2.6%	3.7%	2.9%	3.9%	2.6%	4.0%	2.6%	4.2%
White	7.3%	26.8%	7.6%	26.1%	7.6%	25.9%	7.2%	25.0%	6.9%	24.3%
Other Demographic Characteristics										
Economically Disadvantaged	66.6%	52.6%	66.8%	50.8%	72.2%	58.4%	73.1%	62.0%	74.3%	49.0%
English Language Learners	3.4%	7.6%	3.3%	7.0%	2.9%	7.8%	3.3%	8.0%	2.7%	6.1%
Gifted	1.9%	3.8%	2.5%	4.9%	3.1%	5.0%	3.8%	5.1%	3.7%	4.4%
Special Education	18.0%	15.9%	15.5%	14.6%	16.1%	13.7%	16.3%	15.2%	15.0%	12.2%
Title I	38.2%	23.3%	38.4%	24.8%	35.2%	25.3%	37.9%	24.4%	36.7%	19.9%
Mobility Index	16.2%	14.3%	18.2%	16.3%	14.6%	14.9%	20.7%	14.5%	24.4%	19.4%

*Percentages are in terms of total students. **American Indian also includes American Alaskan and Hawaiian/Pacific Islander.

Teachers: Most teachers in the Learning Leaders schools were female; 60.5% were White; 37.4% were African American; and 60.5% had master's degrees. Most teachers in the comparison schools were also female; 76.6% were White; 20.1% were African American; and 58.8% had master's degrees.

Student achievement and teacher retention analyses⁶

Chief among the goals of Learning Leaders were increasing student achievement and recruiting and retaining highly effective teachers in high-need schools. To better understand the impact of the initiative on student learning and teacher mobility decisions, both student achievement data (i.e., SOL achievement test results in four core subjects) and teacher retention data (i.e., teacher transfer requests

and the number of teachers who actually transferred across schools or left Henrico) were collected and analyzed using two approaches—descriptive analyses and Difference-in-Differences (DiD) analyses.

Descriptive analyses. Descriptive analyses were conducted to summarize the overall trends in student and teacher outcomes for the Learning Leaders schools. This approach served as a useful starting place for understanding the experiences of the eight Learning Leaders schools.

Difference-in-Differences analyses. Descriptive analysis can potentially be misleading, since changes may result from a variety of factors unrelated to Learning Leaders. To address this concern, CTAC used DiD methodology to directly estimate the impact of Learning Leaders. The DiD approach is commonly used in econometrics and social sciences. It examines the differential effect of a treatment on a treatment group versus a control group by comparing the average change over time in the outcome variable(s) for the treatment group, compared to the average change over time for the control group.

In this study, we compared the outcomes (for student achievement and teacher retention) from Learning Leaders schools to outcomes for a set of observationally-similar but somewhat higher achieving comparison schools both before and after the implementation of the initiative. Differences in the levels of variables, e.g., percent FRPL, would therefore be controlled for, and thus would not affect the estimates. In addition, this approach served to eliminate any unobserved time-invariant factors (e.g., a student's innate ability) as potential explanations for the estimated impact of the Learning Leaders initiative.

Nevertheless, because the selection of Learning Leaders schools was made by HCPS stakeholders, it may be that Learning Leaders and comparison schools still differ in unobserved ways that may cause Learning Leaders schools to produce larger or smaller gains independent of Learning Leaders. Although the inclusion of comparison schools mitigated this possibility, caution is still warranted when interpreting the findings.

Besides the traditional DiD model, we also used other estimation strategies, including a time-based DiD model. (In the end, results for the time-based DiD model were consistent with the overall findings of the traditional DiD model though they were generally not statistically significant.) Though a regression discontinuity (RD) model would provide for stronger statistical analysis, the small sample size precluded a meaningful RD analysis.

Surveys

Perceptions of educators in the eight Learning Leaders and 16 comparison schools were gathered in the spring of the five years of the Learning Leaders initiative (i.e., spring 2011, 2012, 2013, 2014, and 2015). The web-based confidential survey focused on (a) school conditions and culture; (b) opportunities for professional improvement and leadership; (c) content of professional development; (d) professional performance and evaluation; (e) performance-based compensation; and (f) knowledge regarding the Learning Leaders initiative. The survey instrument also included an open-ended question inviting respondents to share comments or concerns about the initiative.

An average of 1,400 staff were surveyed each year with an average response rate of 37.1%. In all years, the response rates for the Learning Leaders schools were consistently higher than those for the comparison schools. Classroom teachers were the largest group of respondents in both school groups, with other certified staff making up the second largest group.

Parents were also invited to participate in a parent survey, either online or using a hard copy of the survey. Both were available in English and Spanish. Questions focused on (a) school conditions and culture; (b) performance-based compensation; and (c) knowledge regarding the Learning Leaders initiative.

Survey responses were on a 5-point Likert scale and were analyzed using *t*-tests to examine the statistical significance of the differences across groups. These analyses focus on comparisons across the five years of the initiative, the two school groups (i.e., Learning Leaders and comparison schools) and the Learning Leaders administrators versus teachers. For the purpose of these analyses we examined the responses of educators in three teacher categories: classroom teachers, other certified staff, and non-certified staff. Since nearly all respondents were classroom teachers and the responses of the educators in the other two groups were not significantly different from classroom teachers, they have been grouped into one category, “teachers,” for the purpose of this report. For similar reasons, the principal and assistant principal responses have been grouped into one category, “administrators.”

In addition, factor analyses were conducted and Cronbach’s alpha was calculated to establish the factor structure of the survey and the internal consistency of the surveys items within each scale.

Interviews and focus groups

Each year in early April, CTAC conducted confidential interviews and focus groups with dozens of educators and stakeholders in the division. Interview participants included members of the school board, central administrators, school principals, classroom teachers, teacher union representatives, parents, and students. Table II.3 provides a summary of the interviewees by role.

TABLE II.3

Number of Interview and Focus Group Participants*

Role or Role Group	2010–11	2011–12	2012–13	2013–14	2014–15
Board of Education	4	5	5	5	5
Superintendent	1	1	1	1	1
External/Business Leaders	3	2	2	1	1
Central Office Administrators	6	6	5	6	9
Curriculum and Instruction Administrators	8	7	5	7	4
Principals: Learning Leaders	8	8	8	8	7
Principals: Non-Learning Leaders	10	9	10	21	18
Teacher Association Leaders	2	2	1	1	1
Teachers: Learning Leaders	18	13	14	14	12
Teachers: Non-Learning Leaders	21	21	18	N/A	N/A
Parents	13	11	11	15	14
Students	17	17	15	21	18
Total Participants	111	102	95	100	90

*Some participants served in multiple roles; however, this is an unduplicated count.

Individual interviews took approximately one hour; focus groups took ninety minutes. The research team regularly reviewed and revised interview and focus group protocols in response to the previous years' findings and shifting local contexts. Focus group participants were identified by the division and included teachers and principals representing a variety of school levels and subject areas.

All of the interview and focus group responses were scripted in as much detail as possible and analyzed using NVivo 9.0 software. The analysis focused on the major themes. For example, responses on professional development, school climate and conditions, performance-based compensation, etc., were analyzed separately across all interviews and focus groups.

Limitations of the data and analysis

While a variety of data was collected and multiple analytic approaches were employed, there are limitations on data collection and analysis.

To reiterate, while the DiD analysis on student achievement and teacher retention suggests statistically significant and substantively meaningful associations, they are still susceptible to sources of bias. For example, while we do control for all available confounders such as changes in student demographics and designations in these schools over time, other potentially relevant factors such as different teacher characteristics, student mobility patterns, and principal leadership characteristics were not available to us to explicitly control for in the DiD model.

In addition, although the research team collected and analyzed educators' survey responses in both Learning Leaders and comparison schools across the years, the data were perceptual in nature and the response rates by year varied considerably. Meanwhile, it is important to note that the surveys were anonymous, which made it impossible to identify whether the same teachers and principals responded from one year to the next. As a consequence, some of the changes in perception that we observed from year to year may be attributed to different groups of respondents in different years rather than reflective of the changing mindset of individual respondents.

In spite of these limitations, however, consistent findings emerged from the student achievement and teacher retention analyses, survey responses, interviews, and focus groups. The findings delineate a clear picture of the strengths and challenges of the Learning Leaders initiative.

III CHAPTER

Learning Leaders’ Impact: Student Achievement and Teacher Retention

Learning Leaders’ achievement outcomes validated the high expectations expressed by participating educators at its outset. The pivotal evaluation finding is that the initiative succeeded in improving student achievement in its targeted high-need schools. It did so despite a continued high rate of teacher turnover, a finding that supports other evidence that the initiative improved teacher, administrator, and organizational effectiveness in Learning Leaders schools. This section details those outcomes.

Learning Leaders improved student achievement in its targeted high-need schools.

CTAC’s achievement analysis—detailed in Chapter II—was based on SOL scores in grades 3-8 in four of the five tested subjects ⁷ (English language arts, mathematics, science, and history) over eight years: 2007-08 to 2014-15. This time span is separated into pre-Learning Leaders (2007-08 to 2009-10) and post-Learning Leaders (2010-11 to 2014-15). High schools are not included in this analysis because K-8 and high school assessments are not parallel: K-8 SOLs are grade-level tests; high school SOLs are end-of-course exams administered in a locally determined sequence.

The analysis was conducted using two methods:⁸ (1) a description of changes in SOL scores over time; and (2) Difference-in-Differences (DiD) analyses. The DiD analyses compared SOL changes over time in seven Learning Leaders schools (excluding the Learning Leaders high school) versus changes over time in 14 comparison schools (excluding the two comparison high schools). DiD analyses help strengthen a “causal warrant”—in other words, help make the case that the SOL score changes observed in the Learning Leaders schools from the pre- to post-initiative periods are attributable to Learning Leaders.

Learning Leaders’ scores increased in all four subjects. The opposite happened in comparison schools.

The key findings from this analysis are that:

- On average, scores increased in Learning Leaders schools in all four subjects from the pre- to post-Learning Leaders periods. The opposite occurred in comparison schools where scores in all four subjects declined. It is important to note that prior to the start of Learning Leaders, SOL scores in both sets of schools were lower than the division’s average, but in the schools that would become Learning Leaders schools, scores were slightly more negative. Yet by the end of school year 2014-15, because of the gains by students attending Learning Leaders schools and achievement losses in comparison schools, the test score gaps between the two groups of schools had narrowed substantially across subjects.
- The positive impact of Learning Leaders is statistically significant in science at the $p < 0.05$ level and in history at the $p < 0.10$ level.

By subject, Learning Leaders bolstered student achievement over the five-year period as follows:

- For science, the achievement gain was 17% of a standard deviation. Compared with the comparison schools, Learning Leaders contributed approximately 5 to 8 additional months of student achievement growth.⁹ This effect is statistically significant at the 5% level.
- For history, the achievement gain was 18.6% of a standard deviation. Compared with the comparison schools, Learning Leaders contributed approximately 7 to 9 additional months of student achievement growth. This effect is statistically significant at the 10% level.
- For mathematics, the achievement gain was 12.6% of a standard deviation. Compared with the comparison schools, Learning Leaders contributed approximately 2 to 5 additional months of student achievement growth.
- For English language arts (ELA), the achievement gain was 11.6% of a standard deviation. Compared with the comparison schools, Learning Leaders contributed approximately 4 to 6 additional months of student achievement growth.

In considering months of student gain, it is important to bear in mind that the numbers do not represent findings in the division as a whole. The statistical analysis is confined to a set of relatively high-need schools—the Learning Leaders schools and the comparison schools.

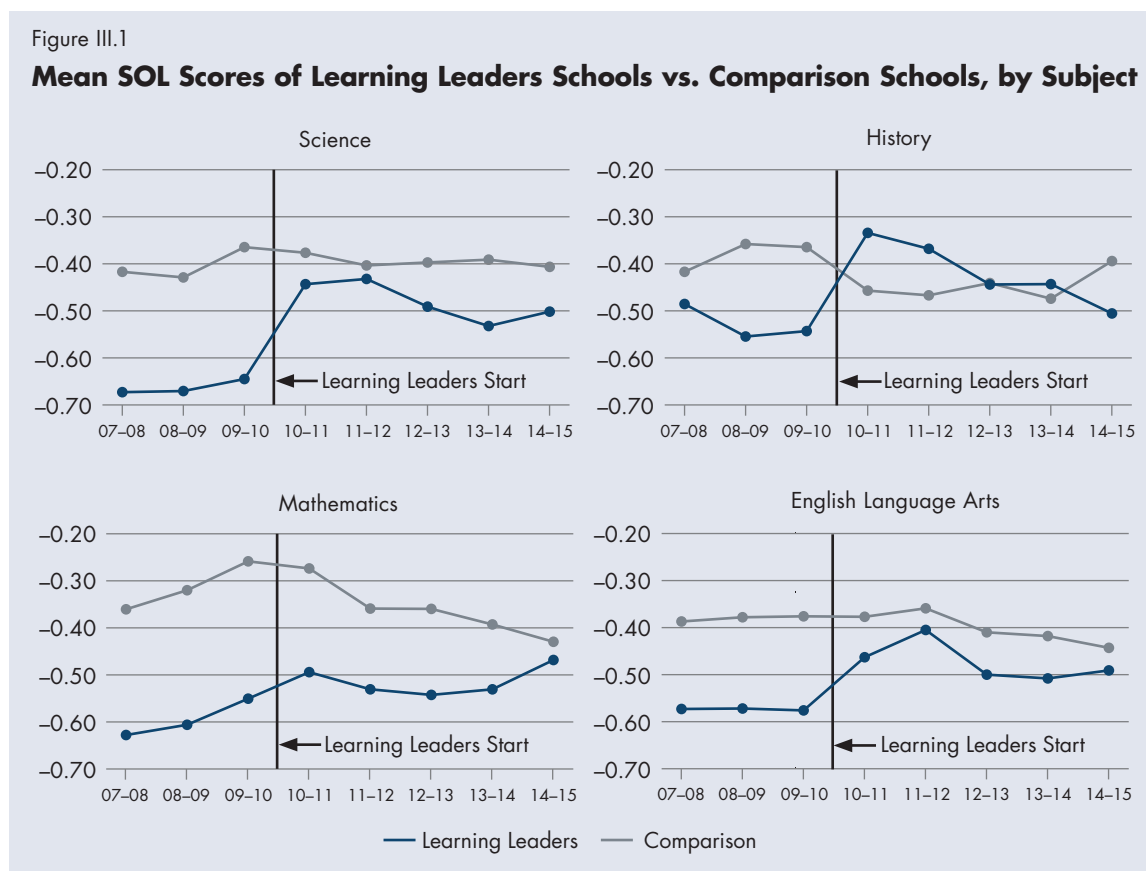
For ELA, science, and history, the achievement improvement occurred in the first year of the initiative and was maintained in the later years. For mathematics, the impact was less prominent initially but increased over time.

The following provides more specific detail on achievement findings from the descriptive analysis and the DiD analyses:

Achievement findings from the descriptive analysis

Descriptive statistics are useful for understanding the achievement trends of the seven Learning Leaders schools analyzed. To determine whether the achievement growth rate in these schools is greater or smaller than that in comparison schools, we first describe average student outcomes (measured in terms of standardized mean SOL scores) by subjects over time.¹⁰

Figure III.1 indicates that there were some systematic differences between Learning Leaders and comparison schools prior to the 2010-11 launch of the Learning Leaders initiative. Average SOL scores for both the initiative and comparison schools were lower than the average for all Henrico schools. But in the comparison schools, scores were higher than in the Learning Leaders schools. This might be expected, since Learning Leaders schools were selected specifically because they serve the largest proportion of economically-disadvantaged students.



In all subjects, scores increased sharply in the Learning Leaders schools after the first year of implementation. By contrast, scores decreased in the comparison schools. In mathematics, the gap between Learning Leaders and comparison schools kept closing over the course of the initiative. In the first two years of the initiative, scores for ELA and science in Learning Leaders schools fast approached those of the comparison schools, and Learning Leaders history scores surpassed those in comparison schools. By the end of the initiative, Learning Leaders scores in all four subjects ended up closer to those of comparison schools than they were at the start of the initiative, notably so in ELA, science, and mathematics.

Achievement findings from the Difference-in-Differences analyses

Descriptive analyses alone can't inform whether the observed positive achievement change in Learning Leaders schools was *caused* by the Learning Leaders initiative.¹¹ Because of this limitation, CTAC used a Difference-in-Differences (DiD) model and a time-based Difference-in-Differences (TDiD) model to estimate effects specific to Learning Leaders.

The DiD and TDiD models compare Learning Leaders schools to comparison schools both before and after implementation of the Learning Leaders initiative. In contrast to the descriptive analysis, both DiD and TDiD models can rule out any potential time-invariant confounders, even if they are unobservable and/or unmeasurable (e.g., a student's innate ability). In addition, these models control any observable and measurable student characteristics that may contribute to student growth outcomes.

These approaches have limitations of their own as they require that certain assumptions are met. For example, they assume that the trends in the comparison schools reflect what the trends in the Learning Leaders schools would have been had Learning Leaders not taken place. Acknowledging that this might not be the case in Henrico since the Learning Leaders schools were not randomly selected, the DiD and TDiD models provide estimates that have the strongest possible causal warrant, given the design of the study.

DiD analysis: results by subject

The basic structure of the DiD model in estimating the effect of Learning Leaders on student achievement takes the form of this equation:

$$Y_{ist} = \beta_0 + \beta_1 (LL_s) + \beta_2 (Post_t) + \beta_3 (LL_s \times Post_t) + X_{ist} + e_{ist}$$

Here Y_{ist} is the standardized SOL test score of student i in school s at time t . This outcome is modeled as a function of the following variables: variable LL_s , which is coded 1 if a student is in a Learning Leaders school and 0 otherwise; variable $Post_t$, which is coded 1 if the observed test score comes from the post-implementation period of Learning Leaders and 0 otherwise; and an interaction term of LL_s and $Post_t$. The DiD estimate of the effect of the initiative is measured by β_3 , which identifies the average effect on student achievement in Learning Leaders schools following the announcement of the initiative. In addition, a vector of student-level covariates X_{ist} is included to control any observed differences in the Learning Leaders and comparison schools. Finally, because the treatment of interest was assigned at the school level, standard errors are clustered on schools.

As reported in Table III.1, the estimated impact of Learning Leaders on SOL scores, indicated by the coefficient of $LL_s \times Post_t$, is as follows:

- For science, the estimated effect of Learning Leaders is 0.17 standard deviation units. Compared with the comparison schools, Learning Leaders contributed approximately 5 to 8 additional months of student achievement growth. This estimated effect is statistically significant at the 5% significance level.
- For history, the estimated effect is 0.186 standard deviation units. Compared with the comparison schools, Learning Leaders contributed approximately 7 to 9 additional months of student achievement growth. The estimated effect for history is statistically significant at the 10% level.
- For mathematics, while a typical student in the comparison schools registered no improvement in the post-implementation period (as shown by the negative 0.009 standardized units), the Learning Leaders student appears to have materially improved—a pre-post difference of about 0.117 standardized units, or about 0.126 standardized units more than the comparison schools. Compared with the comparison schools, Learning Leaders contributed approximately 2 to 5 additional months of student achievement growth. Though the estimate is meaningful in size, the analysis is somewhat low-powered and it is not statistically significant.
- For ELA, the estimated effect of Learning Leaders is 0.116 standard deviation units. Compared with the comparison schools, Learning Leaders contributed approximately 4 to 6 additional months of student achievement growth. Though the estimate is meaningful in size, the analysis is somewhat low-powered and it is not statistically significant.

TABLE III.1

DiD Estimates of the Impact of Learning Leaders on Student Achievement, by Subject

	Science	History	Mathematics	English Language Arts
Learning Leaders (Learning Leaders schools in the pre-period)	-0.105 (0.071)	-0.023 (0.095)	-0.160** (0.076)	-0.067 (0.041)
Post (Comparison schools in the post-period)	0.049 (0.055)	-0.019 (0.056)	-0.009 (0.024)	0.049* (0.030)
Learning Leaders x Post (Learning Leaders schools in the post-period)	0.170** (0.074)	0.186* (0.098)	0.126 (0.087)	0.116 (0.074)
Constant (Comparison schools in the pre-period)	-0.505*** (0.057)	-0.478*** (0.068)	-0.394*** (0.059)	-0.500*** (0.033)
No. of Observations	28,937	49,045	61,262	61,043
Covariates	Y	Y	Y	Y

Note: ***represents statistical significance at $p < 0.01$; **at $p < 0.05$; *at $p < 0.10$. The estimated coefficients of Learning Leaders and its interaction term(s) are all relative to the coefficients of comparison schools.

The results on the other variables in Table III.1 show the pre-Learning Leaders achievement of comparison schools (*Constant*), the pre-Learning Leaders achievement of Learning Leaders schools relative to that of comparison schools (LL_s), and the growth of comparison schools from the pre-Learning Leaders period to the post-Learning Leaders period ($Post_t$).

Again, it is important to bear in mind that the numbers do not represent findings for the division as a whole. The statistical analysis is confined to a set of relatively high-need schools—the Learning Leaders schools and the comparison schools.

TDiD analysis: shock effects (i.e., first year impact) and trend effects by subject

The basic structure of the TDiD model in estimating the effect of Learning Leaders on student achievement takes the form of this equation:

$$Y_{ist} = \beta_0 + \beta_1 (Time_t) + \beta_2 (Post_t) + \beta_3 (Time_t \times Post_t) + \beta_4 (LL_s) + \beta_5 (LL_s \times Time_t) + \beta_6 (LL_s \times Post_t) + \beta_7 (LL_s \times Time_t \times Post_t) + X_{ist} + e_{ist}$$

The variables are defined the same as in the previous equation, with a new variable, $Time_t$ added to represent a linear time trend. It has been centered so that the constant, β_0 , represents the average standardized SOL score in the comparison schools in the pre-Learning Leaders period. The coefficient of $Time_t$, β_1 , captures the growth rate in SOL scores for the comparison schools during the pre-Learning Leaders period. As mentioned above, the TDiD model allows us to examine two different kinds of impact of the initiative. The first is called a “shock effect,” i.e., the first-year impact of participating in Learning Leaders in 2010-11. This shock effect is captured by β_6 , the coefficient of variable $LL_s \times Post_t$. The second is a “trend effect,” i.e., the impact of Learning Leaders after the first year. This trend effect is captured by β_7 , the coefficient of variable $LL_s \times Time_t \times Post_t$. For instance, a statistically significantly positive estimate on β_7 implies that Learning Leaders has continued to increase SOL scores after the first year.

Table III.2 reports the TDiD estimates, where the shock and trend effects of Learning Leaders are captured, respectively, by the coefficients of $LL_s \times Post_t$ and $LL_s \times Time_t \times Post_t$.¹² The analysis demonstrates that the shock effects (the front-loaded positive impacts) for science, history, and ELA were large. Moreover, the trend effects for those subjects indicate that the “shock effect” achievement gains were largely maintained in the later years. For mathematics, the shock effect was moderate and the trend effects indicate moderate improvement continuing over time. More specifically:

Shock effects

- In science, Learning Leaders led to a statistically significant increase in achievement—by 26.4% of a standardized deviation unit—in the first year.
- In history, the initiative led to a statistically significant increase in student achievement—by 38.1% of a standardized deviation unit—in the first year.
- In mathematics, the estimated shock effect of 0.052 is moderate and not statistically significant, especially when compared with estimates for the other subjects.

- In ELA, the estimate of 0.124 on the coefficient of $LL_s \times Post_t$ suggests the initiative increased student achievement by 12.4% of a standardized deviation in the first year of the initiative. This estimated shock effect is slightly larger than the DiD model's estimated average effect, indicating that Learning Leaders' impact is front-loaded. The estimate is not statistically significant.

TABLE III.2

TDiD Estimates of the Impact of Learning Leaders on Student Achievement, by Subject

	Science	History	Mathematics	English Language Arts
Time (Time trend of the comparison schools in the pre-period)	0.051** (0.021)	0.050** (0.026)	0.063** (0.033)	0.025 (0.024)
Post (Comparison schools in the first year of the post-period)	-0.035 (0.053)	-0.127** (0.049)	-0.034 (0.057)	0.034 (0.040)
Learning Leaders (Learning Leaders in the pre-period)	-0.126 (0.089)	-0.095 (0.138)	-0.174* (0.097)	-0.068 (0.049)
Learning Leaders x Time (Time trend of the Learning Leaders schools in the pre-period)	-0.015 (0.036)	-0.051 (0.058)	-0.011 (0.068)	-0.002 (0.033)
Learning Leaders x Post (Learning Leaders schools in the first year of the post-period)	0.264** (0.092)	0.381** (0.123)	0.052 (0.125)	0.124 (0.098)
Time x Post (Time trend of the comparison schools in the post-period)	-0.048** (0.020)	-0.033 (0.037)	-0.090** (0.037)	-0.034 (0.023)
Learning Leaders x Time x Post (Time trend of the Learning Leaders schools in the post-period)	-0.015 (0.041)	-0.004 (0.070)	0.046 (0.083)	-0.001 (0.042)
Constant (Comparison schools in the pre-period)	-0.429*** (0.047)	-0.407*** (0.063)	-0.301*** (0.054)	-0.463*** (0.030)
No. of Observations	28,937	49,045	61,262	61,043
Covariates	Y	Y	Y	Y

Note: ***represents statistical significance at $p < 0.01$; **at $p < 0.05$; *at $p < 0.10$. The estimated coefficients of Learning Leaders and its interaction term(s) are all relative to the coefficients of comparison schools.

Trend effects

- In science, history, and ELA, the large first-year achievement increase is a permanent, rather than temporary boost. The very small and non-significant estimates of trend effects (captured by the coefficient estimate on $LL_s \times Time_t \times Post_t$) on science, history, and ELA of -0.015, -0.004, and -0.001, respectively, suggest that the shock effect, or front-loaded positive impact, is sustained in the later years.
- In mathematics, after a moderate first-year achievement increase, achievement continued to show moderate improvement in later years. While the initial effect of Learning Leaders is less prominent in mathematics, there are signs of an ongoing, gradual effect. The estimated trend effect of 0.046 is not statistically significant but is quite substantive relative to that of the other subjects.

Learning Leaders was not a defining factor in teacher retention.

Making the achievement gains more impressive, the evaluation found that teacher retention remained unaffected by Learning Leaders. While disappointing to the initiative's leadership, that finding also means that the initiative resulted in improved student achievement in spite of continued high teacher turnover. In short, the initiative aimed to retain teachers to get better student results but got better results even though it did not retain teachers.

Findings show that about the same number of teachers left the division or transferred to other division schools as had been the norm before the initiative.

Learning Leaders aimed to retain teachers to get better results but got better results even though it did not retain teachers.

The data are consistent with the perceptions of interviewees that the initiative was not turning out to be a defining factor in attracting or retaining teachers in high-need schools. At the same time, the achievement results validated interviewees' repeated assertions that the initiative was succeeding powerfully in its aim of systematically building instructional capacity.

Teacher retention analyses

As with achievement data, CTAC analyzed teacher retention data descriptively and using DiD methodologies.

- The percentage of teachers who left HCPS was unaffected. Between 15.1% and 23.1% of teachers in Learning Leaders schools left the division each year between 2007-08 and 2014-15, with considerable variability from one year to the next.¹³ Comparison schools had consistently lower rates of teacher exit. In neither case was there a consistent upward or downward trend over time.

- The percentage of teacher transfers to other HCPS schools was unaffected. As with teacher exit, there was no clear upward or downward pattern in either the Learning Leaders or comparison schools. The fluctuations in both groups of schools appear to mirror each other, suggesting that whatever the cause, it affected both Learning Leaders and comparison schools, meaning that Learning Leaders was not the driver.

The following provides more specific detail on teacher retention from the descriptive analysis and the DiD analyses:

Descriptive findings on teacher attrition and retention

Two teacher behavioral outcomes that could have been affected by the introduction of Learning Leaders are teacher exit (from Henrico) and teacher transfer (to other Henrico schools). Depending on their positive or negative responses to Learning Leaders, teachers may have seen it as an incentive to stay in Henrico and in Learning Leaders schools or to leave.

Figure III.2

Average Percent of Teacher Exits and Transfers in Learning Leaders vs. Comparison Schools

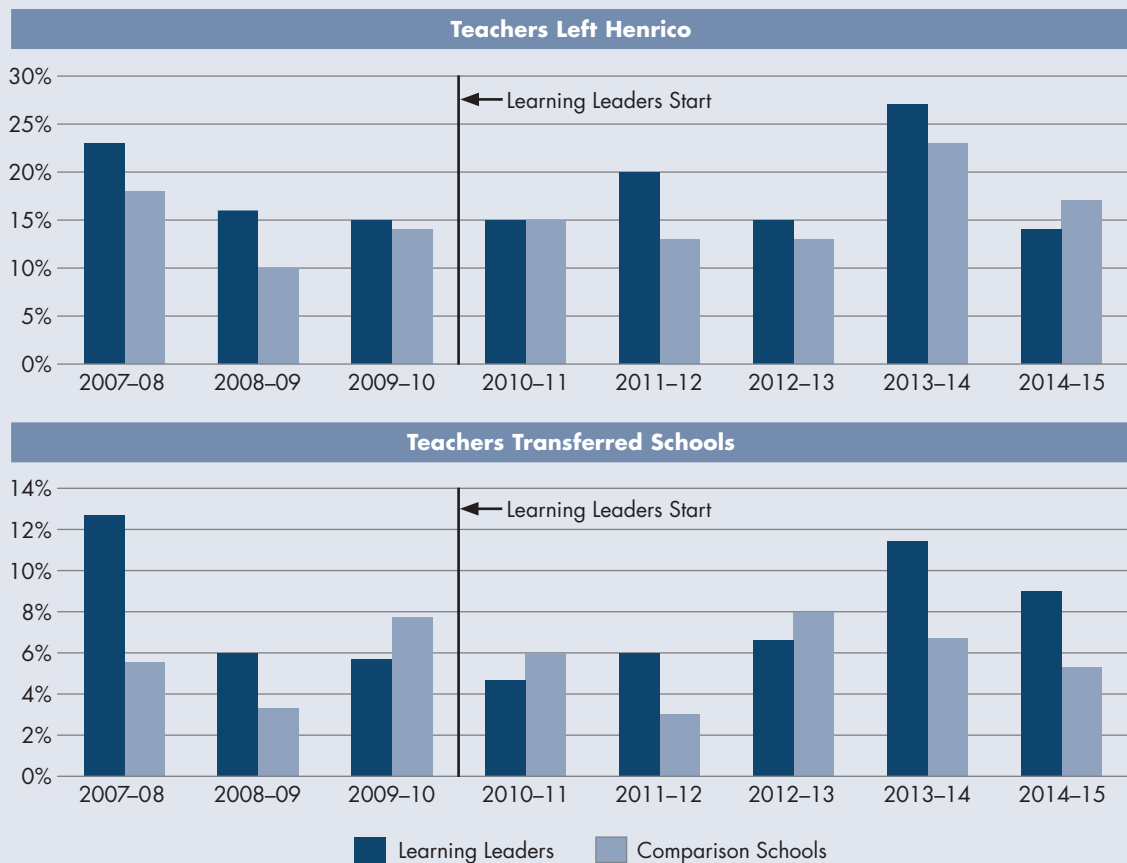


Figure III.2 presents teacher exits and transfers for Learning Leaders and comparison schools in the pre- and post-initiative periods. The patterns for teacher exits and transfers are less clear than for student achievement. But one outcome in particular—the spike in both exit and transfer rates in school year 2013-14—suggests that the initiative may not have been a defining factor in attracting and retaining high quality teachers in high-need schools.

Historically, between 15.1% and 23.1% of Learning Leaders school teachers and between 9.6% and 18.4% of comparison school teachers left Henrico each year. The percentages during the initiative period remained comparable, except for the temporary spike in 2013-14.

Despite higher exit rates in the Learning Leaders schools in 2007-08 and 2008-09, exit rates are virtually the same between the Learning Leaders and comparison schools in school years 2009-10 and 2010-11, just before and after the introduction of the initiative, suggesting that some Learning Leaders teachers who otherwise might have left Henrico instead decided to stay, in anticipation of and during the launch of the initiative.

On teacher transfer, the patterns of school years 2009-10 and 2010-11, relative to the patterns in the previous two years, lead to a similar conclusion, i.e., that Learning Leaders teachers who otherwise might have applied for transfers to other schools instead chose to stay as the initiative got underway.

Findings from DiD analyses of teacher attrition and retention

DiD analysis: results for teacher exit and transfer. Table III.3 presents the results of the DiD analysis for the two teacher behavioral outcomes: the probability of teachers leaving Henrico at the end of each school year, and the probability that teachers transferred across schools within the division.

TABLE III.3

DiD Estimates of the Impact of Learning Leaders on Teacher Exits and Transfers

	Left Henrico	Transferred Schools
Learning Leaders (Learning Leaders schools in the pre-period)	-0.041** (0.013)	0.025 (0.015)
Post (Comparison schools in the post-period)	0.022* (0.012)	0.003 (0.011)
Learning Leaders x Post (Learning Leaders schools in the post-period)	-0.019 (0.015)	-0.009 (0.017)
Constant (Comparison schools in the pre-period)	0.140*** (0.007)	0.055*** (0.009)
No. of Observations	8,787	7,428
Covariates	Y	Y

Note: ***represents statistical significance at $p < 0.01$; **at $p < 0.05$; *at $p < 0.10$. The estimated coefficients of Learning Leaders and its interaction term(s) are all relative to the coefficients of comparison schools.

A key indicator that the initiative had little or no impact on attrition and retention is the coefficient on the interaction term $LL_s \times Post_t$. The middle column gives the estimated impact of Learning Leaders on a teacher's exit from Henrico. The non-significant estimate of -0.019 suggests a very limited impact on teacher retention as measured by leaving Henrico. The result for teacher transfer, shown in the last column, also indicates very limited, if any, impact, with a non-significant estimate of -0.009.

TDiD analysis: shock effects (i.e., first year impact) and trend effects. Table III.4 presents the TDiD results for teacher outcomes. As with the student achievement analysis, the shock effect is captured by the coefficient on $LL_s \times Post_t$, and the trend effect is captured by the coefficient on $LL_s \times Time_t \times Post_t$.

In terms of teacher exit, neither the estimated shock effect nor the estimated trend effect is statistically significant. Although the estimated shock effect is moderate in magnitude, it is too weak a sign to conclude any effect, given the “no impact” finding of the DiD model and the lack of statistical significance.

In terms of teacher transfer, although the estimated shock effect is not statistically significant, the estimated trend effect of 0.059 is both statistically significant and large in magnitude. This would suggest that, while Learning Leaders had no immediate impact on teacher transfers in the first year of

TABLE III.4

TDiD Estimates of the Impact of Learning Leaders on Teacher Exits and Transfers

	Left Henrico	Transferred Schools
Time (Time trend of the comparison schools in the pre-period)	-0.019 (0.012)	0.012 (0.010)
Post (Comparison schools in the first year of the post-period)	0.014 (0.029)	-0.020 (0.023)
Learning Leaders (Learning Leaders in the pre-period)	0.009 (0.032)	-0.044* (0.024)
Learning Leaders x Time (Time trend of the Learning Leaders schools in the pre-period)	-0.020 (0.023)	-0.047** (0.018)
Learning Leaders x Post (Learning Leaders schools in the first year of the post-period)	0.033 (0.040)	0.031 (0.032)
Time x Post (Time trend of the comparison schools in the post-period)	0.034** (0.016)	-0.010 (0.011)
Learning Leaders x Time x Post (Time trend of the Learning Leaders schools in the post-period)	0.012 (0.028)	0.059** (0.022)
Constant (Comparison schools in the pre-period)	0.112*** (0.015)	0.073*** (0.021)
No. of Observations	8,787	7,428
Covariates	Y	Y

Note: ***represents statistical significance at $p < 0.01$; **at $p < 0.05$; *at $p < 0.10$. The estimated coefficients of Learning Leaders and its interaction term(s) are all relative to the coefficients of comparison schools.

implementation, it did have an impact in subsequent years, with an average increase in cross-school movements of 5.9 percentage points per year. But we discount this finding, since it is most likely attributable to random noise resulting from the TDiD's over-sensitivity to yearly fluctuations. Here the DiD results are more trustworthy, and we conclude that there is no clear difference in the pre/post transfer pattern for Learning Leaders versus comparison schools.

One caveat on the DiD analyses: The “no impact” estimates on teacher outcomes, though mostly consistent with CTAC’s survey and interview results, should be read with caution. For one thing, Figure III.2 suggests that the annual teacher outcome fluctuates in ways that do not seem to correspond with the timing of the Learning Leaders implementation, so it is possible that the estimates are distorted by some essential factors at large. Another factor is that only very limited time-varying teacher characteristics are controlled for in the teacher outcome regressions due to data limitations. That too could affect the consistency of the estimates.

IV

CHAPTER

Learning Leaders’ Impact: Capacity Building

Learning Leaders strengthened teacher, principal, and organizational effectiveness.

Learning Leaders’ emphasis on building capacity is what mattered most for improving student achievement. Embedded in the initiative’s processes were layers of support—for teachers to improve their skills at analyzing student learning needs and using differentiated strategies to meet those needs; for administrators to better differentiate mediocre, good, and great practice and help teachers grow instructionally.

Learning Leaders schools became places characterized by educator growth and improved student achievement.

In interviews and surveys, many teachers, principals, and central instructional leaders reported that each initiative component—student learning targets, the observation process, and professional development—had a significant impact in terms of strengthening teacher and administrator effectiveness. But interviewees cited the combined power of the three components as the key to improved student achievement despite high teacher turnover.

Separate impact of each component

Taken separately, each component had a significant impact as follows:

Impact of student learning targets

Learning Leaders teachers and principals overwhelmingly agreed: student learning targets individualize instruction and motivate teachers and students.

Even after the stress of the launch period subsided, teachers, principals, and central instructional leaders continued to speak of the difficulty of trying to set a student's target at the exact right point. There was no magic formula; only analysis and judgment. In the midst of their frustration, however, educators quickly saw the benefits.

First and foremost, the target setting process helps everyone involved to be more cognizant of individual student needs. We say it all the time in education, that we have to have differentiation for each student, and this forced that to happen.

—Central instructional leader

Individualized instruction. Most—especially teachers and administrators—praised the shift in teachers' focus from whole class achievement in the aggregate to that of each individual student. By forcing teachers to drill down and focus on each student, the targets fostered much more attention to individualizing of classroom strategies. In collaborative sessions, teachers began having “better conversations” and engaging in “more reflection” on how to tailor instruction for each child.

Educators quickly saw the benefits: student learning targets individualized instruction and motivated teachers and students.

[The learning targets have] changed the conversation teachers have about instruction, about different instructional strategies that are effective with different kinds of kids. That's what you want.

—Central instructional leader

It has moved the focus from my class to every single student. I think that's the golden egg of [Learning Leaders].

—Learning Leaders elementary teacher

[The learning targets force] teachers to acknowledge how much they contribute to their students' growth. It stops all of the excuses and it places the responsibility on their shoulders... The accountability for teachers and principals with regards to student growth is much higher.

—Central instructional leader

Motivation. Besides focusing on individual student progress, growth targets were also a shift away from the singular imperative to hit absolute proficiency goals. For teachers, the idea of being recognized for how much they helped a student grow, especially for students who were far behind, was highly motivating.

Before, the goal was, “We need an 87% pass rate on [the state test].” Now I, as the teacher, set this goal for you [the student]. This is what I can do for you this year. That drives me.

—Learning Leaders elementary teacher

The morale of teachers is better. With our demographics, students come in with a lack of prior knowledge. In previous years, there was stress that a student [who is far behind] won’t be ready for the third grade level by June. But now you can show how far they’ve gone up, even if they’re at the second grade level by June.

—Learning Leaders elementary coach

Having the target makes you do it every day.

—Learning Leaders elementary teacher

“We put a sticky on their desk of the target. Today they’re exceeding the target by 15 points. They’re so excited that they grew so much.”

By many reports, the targets motivated not just teachers but students as well. Students who knew their own targets had goals to strive for. The targets became the basis for conversations between teachers, students, and sometimes parents about what the student could do to reach his or her goals.

[Students] know exactly what scores they need to get and what they need to do to move to the next level.

—Learning Leaders elementary teacher

It’s falling back on the kids a little... We put a sticky on their desk of their target. Today they’re exceeding the target by 15 points, and they’re so excited that they grew so much. It’s motivating for the kids.

—Learning Leaders elementary teacher

There’s conversation with the student: where are you? Are you comfortable with that? If you’re a C and you want an A, let’s talk about what you need to do to get there. What grades do you need in class, what level of homework effort? Holding the data out to the students has been powerful.

—Learning Leaders elementary principal

Analysis of target attainment supports the motivational impact. To help gauge the impact of student learning targets, CTAC conducted an analysis of targets set and attained from 2011-12 through 2014-15 in grades 4-8 in ELA and mathematics in Learning Leaders schools.¹⁴ The findings provided evidence that generally corroborated educators’ perception of motivational effects: the more rigorous the learning target, the more intensively teachers and students appeared to focus their energy to attain it. Students with higher targets tended to have higher state test scores at the end of the year. Tellingly, after controlling for prior test scores, there was still a relationship between targets set and student achievement outcomes. That is, if two students had similar previous-year SOL scores but one had a higher target, that student tended to have a higher SOL score at the end of the year.

The analysis also provided evidence that teachers did not set inappropriately low targets because target attainment determined part of their incentive pay. One factor mitigating against this was that targets were set in conjunction with the principal and with the support of the Learning Leaders coaches.

More than that, teachers knew that the process was set up to be fair: for a teacher to earn the target attainment portion of the bonus, each student needed to meet only one of the targets set for him or her. Teachers of ELA and mathematics in grades 4-8, for example, could set four targets per student—two targets for ELA and two for mathematics—using both SOL and MAP assessments. A teacher qualified for the bonus if each student met one of the four targets set. Moreover, there was a 20-point range of leeway in SOL target attainment. For example, if a scale score of 550 was the target set, scores of 530 and above qualified as attainment.

As a result, each year more than 90% of teachers qualified for bonus pay on the basis of target attainment. At the same time, the analysis shows, targets were generally set at appropriately rigorous levels. From 2012 to 2015, 34,485 student learning targets were set for ELA and mathematics. Students met approximately 57% of these targets. Across schools, the average target set was near to the average score—within seven points on MAP tests and within 15 points on SOL tests.

Key factor for success: support from the Learning Leaders coaches. By all accounts, the benefits teachers and principals attributed to the target setting process largely owed to the support provided by the 11 Learning Leaders teacher-coaches.

When the launch of learning targets proved more complex than anticipated (see Chapter II), the coaches' focus shifted almost exclusively to helping teachers understand and implement the target setting process. Findings from CTAC's annual surveys show that teachers and administrators found this support highly valuable—notably in terms of helping teachers analyze and use student data—especially because the coaches were on-site, readily-accessible peers.

By 2014, most teachers and, especially, most principals reported that it is always or mostly the case that the Learning Leaders coaches “helped teachers with the process of setting my student learning targets” (91% of principals; 71% of teachers); “demonstrated the value of having a support person who came from our own school’s faculty” (92% of principals; 67% of teachers); and “helped teachers use student data more effectively” (67% of principals; 56% of teachers). As Figure IV.1 shows, especially teacher responses grew even more positive in 2015 in each category.

Interviewees elaborated on this finding, saying that the coaches allowed many teachers to feel safe to open up, individually or in groups, to talk about less than stellar student data, to admit what they didn't know, and to acknowledge areas of classroom practice where they may be struggling. By allaying teachers' fears that candor would work against them, the coaches fostered deeper analysis of data while also promoting a culture of collaboration and an environment of collective responsibility.

I've really seen the impact on collaboration. At first, people said, “I don't want you looking at my test scores.” But now people are more willing to come and ask for help.

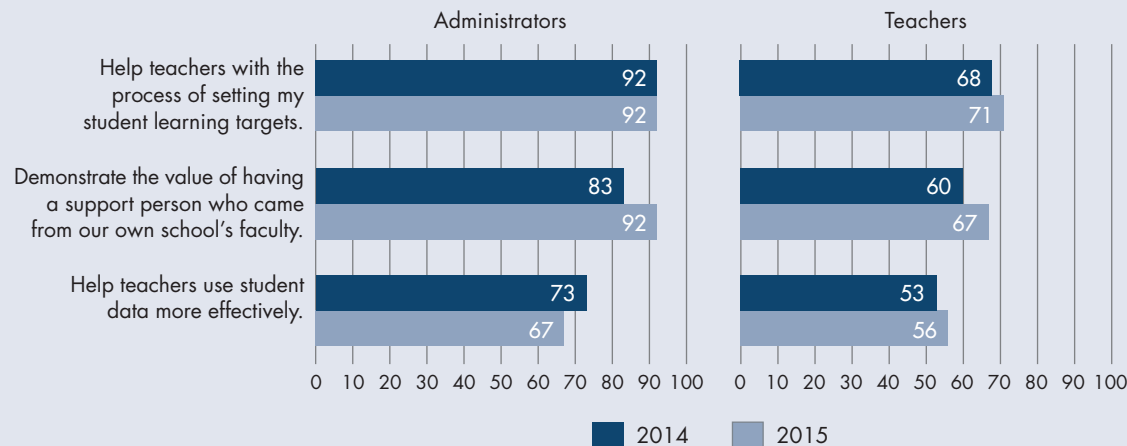
—Learning Leaders elementary coach

There's a culture now to ask for help rather than having someone say you aren't doing something right.

—Learning Leaders elementary teacher

Figure IV.1

Learning Leaders Educators' Perceptions: "Learning Leaders PD coaches mostly or always..."



Impact of the observation process

The observation process accomplished two consequential changes: it focused schools around common instructional goals and it prompted a norm of frequent and deep instructional conversations between principals and teachers.

Prior to Learning Leaders, principals conducted observations looking for much more routine, checklist-style teaching characteristics. By contrast, the rubrics provided descriptions of what levels of expertise look like for each domain of practice delineated in the Danielson Framework. The rubrics' descriptions infused schools with a common mental image of instructional effectiveness in each domain as well as a common vocabulary for talking about instruction. Administrators gained a rigorous tool for giving teachers feedback on classroom practice based on concrete evidence of how well they were doing relative to rubric-clarified expectations.

The observation rubrics infused schools with a common mental image of instructional effectiveness and a common vocabulary for talking about instruction.

Principals reported that the rubrics made instructional goals clearer and more meaningful, creating "almost a paradigm shift in how instruction is delivered."

I love the rubrics; I love the language that we draw from them to talk to teachers.

—Learning Leaders secondary principal¹⁵

The rubrics are helping teachers understand what they're aiming for and how to get there—for example, in classroom management, in student engagement, in students taking responsibility for initiating questions.

—Learning Leaders elementary principal

The pre- and post-conferences are what I love most. I love having the structure of the rubrics and being able to have the teachers understand that getting a 4 on the rubric is about having the student take charge of the lesson, about how you get the students to own the thinking, the reflection.

—Learning Leaders elementary principal

Over time, Learning Leaders principals intensified their praise of the observation process, valuing it not only for pushing principals into classrooms more frequently but for “kicking observation up to a whole different level,” as one principal said.

Learning Leaders is more reflective than [the division-wide evaluation] process. There's reflection on the teachers' part to see if they can assimilate all that information and come to a good landing spot—if not, you guide them to a good landing spot.

—Learning Leaders secondary principal

Central instructional leaders increasingly praised the process for pushing a laser-like focus on instruction and for providing a systematic way to support both teacher growth and evidence-based accountability.

One thing [the observation process] has done is caused the principals and teachers to have meaningful and more frequent dialogue about instruction. Not about needing new blinds, etc., but about the act of teaching and learning. It's driven by the observation protocols. That forces that focus. There's a lot more reflective practice in the Learning Leaders schools than in the other schools in the division.

—Central administrator

There's more rigor, more observations that are mandatory. The feedback that teachers get from administrators has been very well-received by many teachers. Some are put on structured growth or advised that this may not be the career for them. So it assists with keeping great teachers and helps identify struggling teachers and helps with making changes that they need.

—Central instructional leader

While teachers expressed mixed opinions in interviews about whether observations had become less subjective, most valued the new norm of individualized communication with the principal and the “critical, not surface” self-reflection that that conversation sparked. They also valued being pushed to focus relentlessly on effectiveness.

The observation piece should be a bigger piece. It helps you to think about your craft. It provides an outlet to get experience with strategies and get stronger.

—Learning Leaders secondary teacher

It has provided a system for the teachers to get feedback to grow in their craft. That's good for our school. It's good for my own personal growth.

—Learning Leaders secondary teacher

In surveys, the mean responses of Learning Leaders educators on questions related to “professional performance and evaluation” grew year after year from 2011 to 2014, from 3.88 to 4.21, respectively, with a decline to 4.06 in 2015. This category asked for ratings from 1-5 (1=never, 2=rarely, 3=sometimes, 4=mostly, 5=always) on statements that included: “the principal observes each classroom multiple times during the year”; “the principal provides helpful feedback on classroom effectiveness”; and “teacher evaluations conducted by the principal (or a designee) are fair.”

Throughout, the Learning Leaders’ responses were substantially higher than those of educators in comparison schools, which ranged from 3.94 in 2011 to 3.89 in 2015.

TABLE IV.1

Learning Leaders vs. Comparison School Educators’ Survey Responses on Professional Performance and Evaluation Scale, 2011–2015

Scale	Learning Leaders Year	Learning Leaders Schools			Comparison Schools			Mean Difference
		N	MEAN	SD	N	MEAN	SD	
Professional Performance and Evaluation*	Year 1	274	3.88	0.77	438	3.94	0.75	-0.06
	Year 2	103	3.99	0.82	215	3.83	0.85	0.16
	Year 3	417	4.18	0.67	195	4.09	0.72	0.09
	Year 4	198	4.21	0.71	295	4.00	0.75	0.21
	Year 5	202	4.06	0.73	150	3.89	0.82	0.17

*This scale asked for ratings from 1–5 (1=never, 2=rarely, 3=sometimes, 4=mostly, 5=always) on statements that included: “the principal observes each classroom multiple times during the year”; “the principal provides helpful feedback on classroom effectiveness”; and “teacher evaluations conducted by the principal (or a designee) are fair.”

Key factor for success: the administrator support team. The instructional impact of even a well-designed observation process depends fundamentally on the skills of the administrators conducting the observations. For that reason, Learning Leaders created an Administrator Evaluation and Support (AES) team of three retired Henrico administrators solely dedicated to helping principals in the eight initiative schools develop skills in differentiating between basic, proficient, and distinguished classroom practice and helping teachers improve.

An expert team helped principals develop the skills to differentiate between basic, proficient, and distinguished classroom practice and to help teachers improve.

Members of the AES team shadowed administrators as they conducted teacher observations and post-observation conferences, providing feedback, advice, consultation, and coaching. (See Chapter II.)

Having these veterans offering advice and “looking over my shoulder,” as one administrator described it, was for many the best professional development of their careers.

The thing that impresses me most is when we have our team come in to assess us as administrators. So they look at the observation process, they look at the written component and the post-observation piece. We have rubrics, we are assessed. It is the most formal structure that I have ever had, evaluating me conducting an observation. I think it is a stellar component of the grant.

—Learning Leaders secondary principal

[The team] visits us early in the school year to shadow us during the observation process and give us feedback. It helps us hone our observation skills early in the year.

—Learning Leaders elementary principal

I love the support I get from [the AES team]. I've improved my personal skills as an observer and as someone who talks with the teacher after observing them.

—Learning Leaders secondary principal

Impact of professional development

Customized professional development through the Professional Development Academy, coupled with the support of the on-site Learning Leaders coaches, built teachers' knowledge and skills in identified areas of instructional need; developed principals' skills at classroom observation and instructional coaching; and promoted a collaborative culture in the initiative schools.¹⁶

The high school principal had never seen her teachers so engaged by professional development, talking in the halls about strategies they were trying.

The Professional Development Academy. The PD Academy used evidence from ongoing analysis of student data and from the observation process to customize its offerings to individual and school-wide needs. (See Chapter II.)

For example, most of the schools identified quality questioning and student engagement as areas of teachers' greatest needs. The PD Academy responded by providing formal workshops—first for elementary teachers, then for middle and high school teachers—from an “active engagement” expert. He helped teachers develop better conceptual understanding of energized classrooms. Teachers had opportunities to learn and practice such strategies as paired or group activities or back-and-forth exchanges in specific ways that cause classrooms to shift from being passive student environments to places where students are active participants.

Teachers reported seeing immediate results in terms of students perking up, participating more, and thinking harder. Those kinds of reactions prompted increased teacher interest in conferring with each other to share ideas about additional strategies such as use of projects or technology to further spur student enthusiasm.

Teachers are talking to each other, sharing ideas. That's lifting everyone up.

—Learning Leaders elementary teacher

It's the first time we've had high school teachers begging for someone to come back. The feedback from the high school principal, she was raving. She's never seen her teachers that engaged in a PD activity across the board. Teachers were talking in the hallway about the strategies they were trying.

—Central instructional leader

Quality questioning is a beautiful thing for introducing a lesson now. You ask the students, "What do you know about this?" A conversation starts, and you build on that. Students are thinking, giving smart answers.

—Learning Leaders elementary teacher

Not surprisingly, compared with educators in the comparison schools, Learning Leaders educators were more favorable in annual survey responses about the quality and impact of professional development content (see Figure IV.2).

Figure IV.2

Educators' Perceptions of the Content of Professional Development



Responses in the 4.00 to 5.00 range "mostly" or "always" find the content of professional development to be instructionally relevant or valuable (along dimensions such as "deepens relevant subject area" and "improves subject-specific pedagogy"). Responses of 3.00 "sometimes" do.

It's important to note that beginning in the second year of the initiative, HCPS made draconian cuts in professional development due to recession-prompted budget woes. The cuts created a notable disparity between Learning Leaders and most other schools; only Learning Leaders schools had the PD Academy and Learning Leaders coaching program. That difference likely accounts for at least some of the more favorable survey responses on professional development from Learning Leaders educators.

Coaching. The Learning Leaders coaches devoted the bulk of their efforts to supporting the student learning targets process. The trust and camaraderie they established through that work led teachers, especially novices, to turn to them for classroom practice support. For example, a teacher might feel more comfortable turning to the coach, rather than the principal, to ask for advice and support on how to manage instructional transitions more effectively or how to handle student behavioral issues.

[The coaches'] key role is being that peer. When a teacher is struggling, he or she may not feel comfortable talking to us [administrators]. The coach takes that evaluative part out of it.

—Learning Leaders secondary principal

Coaches reported welcoming these requests and going out of their way to respond to them with mentoring and modeling, despite the obvious challenge of finding time, given just 10 hours of designated coaching time a month. One coach credited her principal's willingness to provide a substitute teacher to free up some of her time. Another had a highly capable student teacher who was able to take over the class for periods of time.

Administrators, meanwhile, were getting coaching of their own from the AES team—a feature widely regarded as the key to the effectiveness of the teacher observation and feedback process, which itself was key for teachers' instructional growth. Available only for the eight Learning Leaders schools, the team's intensive, individualized shadowing and support, by all accounts, made administrators better instructional leaders.

If it weren't for TIE, there would not be a lot of direct instruction on observation. It really has helped me.

—Learning Leaders elementary principal

Combined impact of the components

Each of the Learning Leaders components had a significant impact. But the three components working together literally changed the way schools did business. The schools themselves became more effective as whole staffs worked together with an intense instructional focus, used effective processes consistently year after year, and continuously monitored their progress.

Each Learning Leaders component had a significant impact. But the three components working together literally changed the way schools did business.

Besides clarifying an instructional vision and goals, the initiative provided a structure and sustained approach for aligning educators' actions with those goals. As one central instructional leader put it, Learning Leaders creates "alignment between what we say we want for students and what we're actually doing."

Intense instructional focus

Having student learning targets pushed a focus on each individual student's progress, rather than on whether the class on average was meeting achievement benchmarks. Teachers needed to deepen their analysis of student data. And to help students achieve the targets, they sought to expand their instructional repertoire, in collaboration with coaches and other teachers who shared the same students.

With the learning targets, with the coaches—everything is more laser-focused, more targeted, to drill down to student needs.

—Central administrator

Having a clear process to focus on every child and think through where they can be by end of year, that's been a novel idea. It helped a lot of teachers focus.

—Central instructional leader

There is more data collection and analysis. We have a common focus: student achievement and growth, what my students know, and what I can do to improve them more. We share the information. There is more open dialogue among us.

—Learning Leaders elementary principal

Meanwhile, the observation rubrics promoted a different kind of focus. They clarified the vision for specific domains of instruction. Additionally, staffs at each school used evidence from student data and teacher observations to determine which of those domains would be the school's immediate focus for instructional improvement.

Because “we can't do everything at once,” teachers, principals, and central instructional leaders embraced having clear instructional priorities. Along with clear priorities, having staff-wide agreement in determining them was critical to enabling and motivating improvements in classroom practice.

The structure of the observation process and, in particular, having the entire school faculty and administration agreeing on the focus for that process is very, very powerful. Were the division to do that absent this program, it would be the kind of thing that is often not well-received and seen as centralized control.

—Central instructional leader

I have actually done the same rubric [on student engagement] two years in a row to see if I could keep getting even better at the strategy. I definitely think it has helped improve my practice. The rubric makes me more aware of what good practice is. How engaged are my kids right now? It's in the back of my mind all the time. It focuses the whole school and holds you more accountable.

—Learning Leaders elementary teacher

The initiative created “an alignment between what we say we want for students and what we're actually doing.”

Five consistent years of effective processes and high quality support

Educators cited Learning Leaders' sustained use of effective processes as critical in enabling school-wide impact and success. This consistency differed from the churn schools frequently face as rapidly changing reform policies make it difficult to sustain promising strategies over a long enough period of time to determine their efficacy.

Because "we can't operate randomly," educators found it invaluable to have successive years where everyone across the Learning Leaders schools followed consistent processes for student learning targets and for teacher observation and feedback.

Given the division's culture of school autonomy, some educators initially had reservations about walking in lockstep. But principals and teachers came to value not only the quality of the initiative's approaches and tools but also the benefits of predictability and uniformity. Teachers could invest themselves in improving their knowledge and skills in specific areas of practice because they knew the same focus and processes would continue and be reinforced. Principals knew that their staffs were able to experience quality and coherence, year after year, in terms of training, professional development, and coaching.

Prior to TIF, Henrico was a very site-based-management division. TIF brought in very stringent "thou shalt now do the same thing; we'll support and train you." People saw, wow! That's a lot of work, but you get a lot of support from the division... So, I will willingly give up some autonomy for the level of support I can get for being uniform.

—Central instructional leader

The observation process is like a well-oiled machine. We know the process now. The building coaches help with new teachers. We will measure things over time and build up our skill base. The planning and practice are good.

—Learning Leaders elementary principal

The biggest thing has been consistency for the building administrator. It's been most helpful how the building and district administrators work together to calibrate by using the rubric before formal observations. Also, from the observation practice, teachers clearly knew what to expect because they had seen the rubric... So there is consistency of expectations, not just with instructional practices, but with engagement, transitions—each of the components within the big picture.

—Central instructional leader

Continuous progress monitoring

Built into Learning Leaders was the understanding that continuous improvement is contingent on routinely looking at evidence of progress and using that evidence to guide mid-course corrections and educator support.

Because "we can't assume this is working," principals, teachers, and central instructional leaders valued the continual monitoring and self-reflection: "How are we doing? How am I doing?" A norm of greater openness and conversation took hold, with evidence-driven dialogue about teaching practice and student growth fostering a culture of mutual accountability.

It forces the principals to monitor instruction. If principals don't monitor instruction, it won't be as high quality as it could be and it won't lead to those conversations [with teachers]. Teachers know that principals are connected. Ninety-eight percent of teachers want the principal in the classroom seeing what they're doing and helping them be better.

—Central administrator

The phenomenon of administrators not doing what they're supposed to do? That's not an issue at our school. We get good feedback from [the Learning Leaders Director] that helps us keep going. And we stay on each other as a team. One AP has a white board in his office and is noting what we need to do by what date. We inspire each other in that way. We have building level goals that we do—school improvement goals tied to the TIF grant. It helps us write them in a way that's data-driven, achievable but not too easy.

—Learning Leaders elementary principal

Impact of performance-based compensation

The notable individual impact of performance-based compensation was educators' gratification at being recognized for effective efforts in very difficult jobs. "It's respect for our work, if we do this right," is how one principal put it.

Few educators saw bonus pay as an incentive. Instead it was welcome appreciation.

That's different from saying that the money prompted people to work harder, an unpopular implication. While the chance to earn a bonus may have attracted some teachers or nudged some mediocre teachers to improve, few HCPS educators saw rewards for performance as motivational. They felt that the challenges of the job, especially with the extra work of Learning Leaders, require intrinsic motivation. Bonus pay was welcome appreciation.

In hard to staff schools, you're already working hard, then you're working harder to meet additional Learning Leaders criteria. So [incentive pay] may not have kept more teachers. But those who stayed feel more appreciated. With higher morale, we'll perform better. The uptick in morale may be the biggest impact.

—Board member

[With Learning Leaders] the rubrics, observations, and feedback are better, and teachers are getting better at what they're doing, but those things will not keep the teacher at year three from saying I want out. The \$8,000 can't offset this.

—Learning Leaders secondary teacher

Teachers may be attracted by the money, but do they stay? It is a great program but is very labor intensive. Teachers work Saturdays, evenings. They have to be there for the right reasons.

—Comparison secondary principal

From a systems perspective, instituting performance-based pay got people’s attention. It brought media attention to HCPS’s efforts to address the division’s achievement gap. It also helped system leaders push for changes such as alignment of efforts across central office departments in support of the initiative—changes that improved how business is done at the division level.

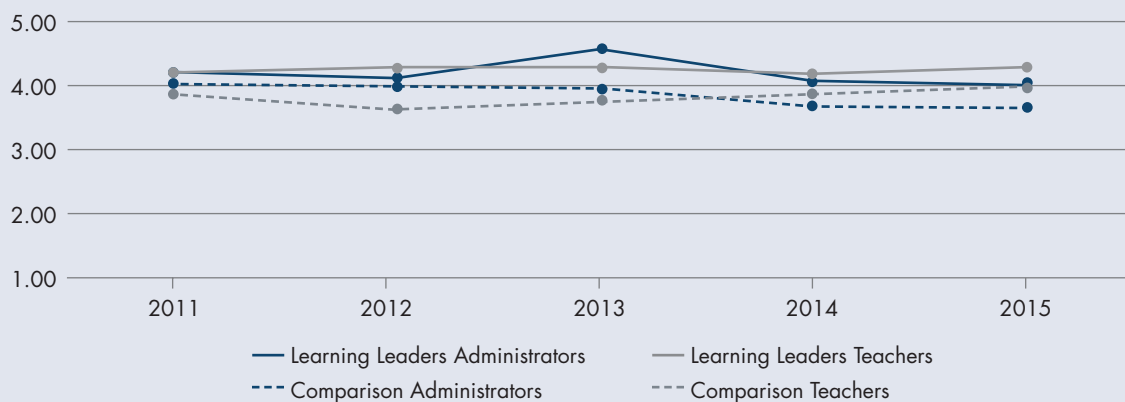
*Implementation crosses many departments and makes their efforts more focused.
Coordinating and aligning all division goals makes it easier to have overall improvements.*

—Central instructional leader

Performance-based compensation also engendered some resentment. Surveys showed that Learning Leaders educators had consistently more favorable attitudes toward performance-based compensation than educators in comparison schools (see Figure IV.3). That difference may have reflected concerns heard in interviews that some comparison schools were in “the exact same situation” as Learning Leaders schools but were not included in the initiative.

Figure IV.3

Educators’ Perceptions of Performance-Based Compensation to Reward Effective Educators



Responses in the 4.00-5.00 range “agree” or “strongly agree” that performance-based compensation should reward educators (along dimensions such as “for [teachers] improving student achievement in their own classrooms” and “for receiving outstanding performance evaluations”). Responses of 3.00 are “undecided.”

Of broader concern was eligibility within the Learning Leaders schools: only teachers of core academic subjects could qualify for incentive pay. Stakeholders across role groups worried that omitting teachers of art, music, PE, and Title I “could pit teacher against teacher, especially in this tough economy,” “could create a rift,” or “could be an impediment.” Over the course of the initiative, teachers, principals, and central instructional leaders overwhelmingly reported that the eligibility restriction created a hurdle for the goal of building a collaborative culture.

We are increasingly convinced that if we had it to do over we would be more inclusive in terms of staff included in Learning Leaders. Including only teachers of core subjects leaves out art, music, and foreign language teachers, along with specialty staff such as engineering teachers. The result has been some sense of “haves” versus “have-nots”, which can interfere with collegiality.

—Central instructional leader

While expanding eligibility mid-course was not financially feasible, the Learning Leaders Director ensured that all teachers in the Learning Leaders schools had access to the initiative’s professional development as well as support from the Learning Leaders coaches.

Dilemma of ending bonus pay. As the grant period drew to a close, concerns grew that because the end of bonus pay would be experienced as a pay cut, the schools might lose teachers. There are no data available on how many teachers may have left at the end of 2014-15 school year for that reason.

However, during 2015 interviews, one highly regarded Learning Leaders coach conveyed that he would be leaving his high-need school, taking a teaching position in a more affluent HCPS school. This coach had already expressed to HCPS leaders, including the board, the frustration of facing a considerable pay cut—the \$8,000 bonus plus his coaching stipend—despite the recognized caliber of his work.

Sustaining Learning Leaders’ reforms

Though the HCPS budget was still recovering from the recession, the board continued deliberations about sustaining some form of additional compensation for educators in the division’s high-need schools. Most stakeholders across role groups favor a straightforward pay differential, rather than performance-based bonuses, for any future change in the pay structure. While adamant that educators should be held accountable, people feel that those who work with the most at-risk students need and deserve additional support and resources.

Educators who work with the most at-risk students need and deserve additional support and resources.

Meanwhile, other aspects of Learning Leaders are being sustained in a way that attests to the initiative’s success: over time, Learning Leaders’ most effective practices and processes became integrated into the division’s way of operating.

The student learning targets process, as noted earlier, provided the model for how the division now factors student growth into teacher evaluation, a state requirement as of 2012. The current system for using division-level content assessments and benchmarks and documenting teacher results operates within the infrastructure created for Learning Leaders. For example, the division’s Office of Research and Planning—highly regarded for its responsiveness to site needs—further expanded its capacity and practices to provide Learning Leaders teachers with user-friendly and timely data. The whole division now benefits.

Learning Leaders was also the division's go-to model when the state began in 2013 issuing a list of low-performing schools and mandating improvement. Several Henrico schools were on the list. The division developed an improvement approach that uses Learning Leaders practices and its approach of undergirding those practices with strong on-site support. For example, staff in the improvement program schools now receive training in the Learning Leaders mode of data inquiry and analysis. Teachers get support to develop the skills to diagnose student learning needs and create instructional plans geared to meeting those needs.

The improvement program schools also operate as a group, following the Learning Leaders example of using uniform approaches and processes for focus, consistency, and mutual support.

Highly important for Learning Leaders sustainability is that its approach—improvement driven by capacity building, not accountability—has strong champions among people in key HCPS leadership roles. That includes the current Superintendent, an HCPS veteran who, in the past, directed the division's professional development program. A key champion is the Learning Leaders Director, the initiative's backbone, who is now Assistant Director of Professional Development. And one of the most effective and enthusiastic Learning Leaders principals is now Director of Elementary Education.

CHAPTER V

Lessons and Implications

The Learning Leaders initiative demonstrates that improvements in instruction and student achievement in high-need schools are correlated with:

An improvement approach driven by capacity building, not accountability.

Rather than leading with accountability and giving short shrift to educator support, as often happens, the Learning Leaders approach put top priority on capacity building. The initiative sent a message of belief in the educators who serve in its high-need schools, premised on the assumption that these teachers and administrators want to keep growing. Accountability to rigorous standards of excellence was built in, as was the incentive of performance-based compensation. But the focus was on strengthening instructional knowledge and skills, and that strategy showed results.

An inclusive rather than top-down approach to reform.

Top-down reforms are often short-lived because they lack ownership by the people called upon to implement them. Top HCPS leaders made the decision to take action on the problem of lagging student achievement in the division's low-performing schools. But their approach was deliberately inclusive. The initiative's design incorporated extensive input from teachers and principals. That not only promoted critical ownership by front line

educators but also bolstered those educators' trust in the commitment of central leaders to provide the support required for success. Throughout, the initiative also gained ballast from a style of leadership that emphasized transparency and responsiveness, with an attitude of "we're all learning together." Because front line educators felt respected and listened to, they were willing to persevere despite steep learning curves, implementation glitches, and a greater workload.

A clear and shared vision, across schools, of effective instruction.

For staffs in struggling schools to pull together in the same direction requires, fundamentally, a common sense of the goal—what does effective instruction look like?—as well as a common language for talking about it. Learning Leaders' standards-based instructional rubric provided a clear picture of differing levels of pedagogical effectiveness for each of its teaching domains. The rubric became the catalyst for continuous school improvement by enabling meaningful instructional conversation among teachers and administrators. As the basis for evidence-based teacher observation and feedback, it provided the anchor for tailored professional development and support.

Sustained implementation of high quality processes that promote reflective practice.

Learning Leaders combined three effective components that together changed the way schools did business. Student learning targets prompted individualized instruction and were motivating—for teachers and students. The observation process enabled ongoing, instructionally-focused dialogue, evidence-based teacher evaluation, and a roadmap for tailored professional development. Finally, customized professional development, including on-site coaching support, allowed teachers to develop the exact knowledge and skills they needed to meet the particular learning needs of the students they served.

Individualized support for principals to be effective instructional leaders.

Learning Leaders recognized that success pivoted on site administrators' skills at differentiating between mediocre, good, and great teaching and their ability to help teachers understand how to improve. The initiative provided Learning Leaders administrators with a team of veterans whose job was to help build those critical skills by shadowing and coaching administrators as they observed teachers and conducted post-observation conferences. Some principals called it the best professional development of their careers.

Classroom embedded feedback and coaching to help teachers improve instruction and become more reflective practitioners.

Learning Leaders promoted deeper and more frequent conversations between teachers and principals, grounded in real evidence of each teacher's strengths and weaknesses. It provided tailored professional development to address identified instructional needs. Its on-site coaches helped teachers analyze each student's learning needs and individualize instruction to meet those needs. Reflection on practice became more routinely collaborative, helping whole staffs grow together instructionally, even with teacher turnover.

A consistent improvement approach across a set of schools combined with a faculty-determined instructional focus at each school.

In Learning Leaders, it mattered that all eight participating schools implemented the same improvement approach in the same way. Doing so meant yielding some autonomy. But in exchange, schools received greater and more effective technical assistance and professional development from the central office. Moreover, while using the same improvement processes, each school's faculty identified which rubric domains or elements—for example, student engagement or quality questioning—would guide customized professional development and support. With the focus determined by their own analysis of needs, whole staffs became invested in the change effort and could feel gratified as a team by improved student results.

Rigorous use of data to inform and individualize instruction, monitor progress, and continuously improve practice.

To set and attain growth targets for each student, teachers had to analyze each student's past achievement much more closely than before to see specifically where and why students thrived or faltered. They began to dig deeper. The support of peer coaches made it safe to discuss less than stellar student data with colleagues, promoting a school-wide norm of collaborative analysis. Teachers grew in their ability to tailor instruction for each student. The student improvement that resulted was motivating—for teachers and students alike.

Conclusion

The Learning Leaders initiative improved student achievement in high poverty schools by applying evidence-based strategies and practices that also have face validity—i.e., they align with common sense. The initiative made instructional improvement its driver and end result. It invested in the variable that matters most for effective instruction: building the knowledge and skills of educators.

Grounded in a clear vision of what effective instruction looks like, the initiative put processes in place that supported instructional growth and fostered a school-wide environment of trust and teamwork. That allowed teachers and administrators to admit what they didn't know, enabling deeper analysis of each student's learning needs and specific tailoring of professional development. These changes infused schools with focus, continuity, and a norm of continuous improvement.

Importantly, Learning Leaders—by way of sound initiative leadership—sent a message of confidence in its people. While holding everyone accountable to rigorous standards and setting an expectation of intensified work at already hard jobs, it tapped into educators' innate desire to help their students succeed. Their gratification at seeing students' progress provided teachers in particular with a powerful incentive to persevere, irrespective of the performance-based compensation that acknowledged their efforts.

Endnotes

Executive Summary

1. Tested subjects in Virginia also include writing, but in Year 5 (2014-15) the state discontinued testing writing at the elementary level. Due to a lack of writing scores for Year 5, CTAC's analysis of student achievement under Learning Leaders includes only the other four tested subjects. It is the case, however, that through the end of Year 4, a pattern of modest improvement occurred in writing.
2. The statistical analysis reports effects in standard deviation units. Subsequent to the analysis, CTAC used empirical estimates from the work of Hill et al. (2007) to translate changes in test score standard deviations into the metric of months of student achievement growth. This metric is only intended to provide illustrative benchmarks. For more details, refer to Hill, C. J., Bloom, H. S., Black, A. R., and Lipsey, M. W. (2007). *Empirical benchmarks for interpreting effect sizes in research* (MDRC Working Papers on Research Methodology). New York, NY: MDRC. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1750-8606.2008.00061.x/pdf>.
9. The statistical analysis reports effects in standard deviation units. Subsequent to the analysis, CTAC used empirical estimates from the work of Hill et al. (2007) to translate changes in test score standard deviations into the metric of months of student achievement growth. This metric is only intended to provide illustrative benchmarks. For more details, refer to Hill, C. J., Bloom, H. S., Black, A. R., and Lipsey, M. W. (2007). *Empirical benchmarks for interpreting effect sizes in research* (MDRC Working Papers on Research Methodology). New York, NY: MDRC. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1750-8606.2008.00061.x/pdf>.

Chapter I

3. Source: Department of Justice's SMART Geographic Information System (GIS) database.
4. The set of teaching standards that guide teacher evaluation in HCPS are known as the Professional Qualities and Instructional Responsibilities (PQRs). All teachers in the division receive annual formative and summative evaluations based on their performance in implementing the PQRs. Evaluation is evidence-based and includes collection of data and artifacts (lesson plans, assessments, student assignments, etc.) related to classroom practice and student achievement outcomes.
5. See The Danielson Group, <https://www.danielsongroup.org>.

Chapter II

6. The UVA team conducted the analysis. See Chapter III.

Chapter III

7. See endnote 1.
8. The descriptive and DiD model results are provided by Dr. James H. Wyckoff of the Curry School of Education at the University of Virginia and Dr. Allison Atteberry of the University of Colorado Boulder's School of Education, CTAC's evaluation partners on the Learning Leaders project.

10. Students' SOL scores have been converted to a scale reported in standard deviation units.
11. The magnitude of the Learning Leaders impact cannot be identified from the descriptive analysis. Further, descriptive analysis does not control for factors such as student and teacher characteristics that may account for the difference in student achievement.
12. Similar to the case of the DiD model, the results on the other variables in Table III.2 show the estimated pre-Learning Leaders achievement of the comparison schools (Constant) and the Learning Leaders schools (LL), the growth of the comparison schools in the pre-LL period (Time) and the Learning Leaders schools (LL \times Time), the growth of the comparison schools from the pre-LL to the post-LL period (Post) and the LL schools (LL \times Post) and the growth trend of the comparison schools in the post-LL period (Time \times Post).
13. One caveat on teacher exit is that the data does not distinguish between teachers who left Henrico and teachers who shifted to a non-teaching role in the division. The analysis treats both as teacher exit.

Chapter IV

14. This analysis was conducted by Dr. Allison Atteberry of the University of Colorado Boulder's School of Education.
15. Secondary educators are middle and high school teachers and administrators, for purposes of this report.
16. For a fuller description of Learning Leaders' professional development (PD) strategy and its impact, especially in regard to teacher coaches, see CTAC's PD review of the initiative at <http://www.ctacusa.com>.

Appendix: Table of Assessments Used for Student Learning Targets by Content Area

Content Area	Assessment	Grade Level
English/Reading (English I and II)	Henrico Achievement Tests (HATS)	K-2
	Phonological Awareness Literacy Screening (PALS)	K-2, K-2 Special Ed.
	Verbal Behavior-Milestones Assessment and Placement Program	K-2 Special Ed.
	Brigance School Reading Assessment	K-2 Special Ed.
	Northwest Evaluation Association Measures of Academic Progress (NWEA MAP)	3-5, 6-8, 9-12
	Standards of Learning (SOL)	3-5, 6-8
	Virginia Alternate Assessment Program (VAAP)	6-8, 11 Special Ed.
	Standards of Learning (SOL) End of Course Test	11
English/Writing	Standards of Learning (SOL)	8
	Henrico Achievement Tests (HATS)	8, 10
Mathematics	Virginia Alternate Assessment Program (VAAP)	K-2 Special Ed.
	Henrico Achievement Tests (HATS)	1-2, K-2 Special Ed.
	Moving with Math (MWM)	K-2 Special Ed.
	Northwest Evaluation Association Measures of Academic Progress (NWEA MAP)	3-5, 6-8
	Standards of Learning (SOL)	3-5, 6-8
Algebra I and II, Geometry	Northwest Evaluation Association Measures of Academic Progress (NWEA MAP)	9-12
	Standards of Learning (SOL) End of Course Test	9-12
Calculus	AP Release Tests	AP
Statistics	AP Release Tests	AP
Science	Henrico Achievement Tests (HATS)	6-7
	Standards of Learning (SOL)	8
	Standards of Learning (SOL) End of Course Test	10-11
	No grade specific courses. Students have different paths.	12
Biology, Chemistry	Standards of Learning (SOL) End of Course Test	9
	TIF Assessment	9
	AP Release Tests	AP
Earth Science I and II, Oceanography	Standards of Learning (SOL) End of Course Test	9
	TIF Assessment	9
Physics	TIF Assessment	11-12
	AP Release Tests	AP
Psychology	TIF Assessment	12
Environment	AP Release Tests	AP
Social Studies	Standards of Learning (SOL)	6-8
	Standards of Learning (SOL) End of Course Test	9-12
US History	Standards of Learning (SOL) End of Course Test	11
World History I and II	Standards of Learning (SOL) End of Course Test	12
	AP Release Tests	AP
Government	TIF Assessment	12
	AP Release Tests	AP
European History	AP Release Tests	AP

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30 WINTER STREET • BOSTON, MA 02108
TEL: 617.423.1444 • E-MAIL: ctac@ctacusa.com
www.ctacusa.com