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Building a Foundation for School Leadership: An Evaluation of the Annenberg Distributed Leadership Project, 2006-2010

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Abstract
Leading school change is a challenging endeavor. Successful leadership requires strategic and sustained effort, particularly in the shifting and uncertain environment of urban public schools. The concept of distributed leadership—in which multiple actors tackle the challenges of school leadership in concert—is a promising way to strengthen professional practice and thereby improve the educational experiences of all students. The Annenberg Distributed Leadership (DL) project was one of the first efforts in the nation to deliberately take on the challenge of designing and implementing a concerted effort to build distributed leadership capacity in a diverse set of urban schools to improve the quality of teaching and learning.

The DL project featured the careful selection of leadership team members to identify and lead instructional improvement efforts; ample professional development to build cohesive teams and help members understand the motivational, psychological, and pedagogical aspects of advocating instructional change; resources to apply to the task; and ongoing school-based coaching to guide leadership team efforts.

This report describes the Consortium for Policy Research in Education's mixed-method evaluation of the DL project. The evaluation featured a cluster randomized control trial, where schools first agreed to participate in the study, and then were chosen by lottery to participate in the DL project or serve in the comparison group. Overall there were 16 DL schools and 21 comparison sites in the evaluation.

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RESEARCH REPORT

Building a Foundation for School Leadership

An Evaluation of the Annenberg Distributed Leadership Project, 2006-2010

Jonathan Supovitz and Matthew Riggan
Consortium for Policy Research in Education
University of Pennsylvania

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RR-73

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Author Biographies

Jonathan Supovitz

Dr. Supovitz is an Associate Professor at the University of Pennsylvania's Graduate School of Education and Co-Director of CPRE. Dr. Supovitz is an accomplished mixed-method researcher and evaluator and has published findings from numerous educational studies and evaluations of school and district reform efforts. He has written widely on the reform implementation process, the role of leadership in school and system improvement, how data can be used for instructional and organizational inquiry, and the influence of testing policy in America. He teaches courses on the policy and instructional uses of assessment, evidence-based leadership, mixed methods research, and organizational learning. He also leads the Evidence-Based Leadership strand of the Mid-Career Leadership Program at the Graduate School of Education at the University of Pennsylvania.

Matthew Riggan

Dr. Riggan earned his Ph.D. at Penn, where his research focused on evaluation strategies for collaborative, community-based programs. He is a Senior Research Investigator at CPRE, and Co-Principal Investigator of an ongoing evaluation of systemic reform in Hamilton County, Tennessee. Dr. Riggan has conducted extensive research on data use in schools and districts, including a four-year study of how teachers, schools and districts utilize interim assessment data, and an ongoing research and development project exploring strategies for improving formative assessment in elementary mathematics. An expert in qualitative methods, Dr. Riggan designed a coding framework for video-recorded leadership team meetings as part of the evaluation of the Annenberg Distributed Leadership Project.

Executive Summary

Leading school change is a challenging endeavor. Successful leadership requires strategic and sustained effort, particularly in the shifting and uncertain environment of urban public schools. The concept of distributed leadership—in which multiple actors tackle the challenges of school leadership in concert—is a promising way to strengthen professional practice and thereby improve the educational experiences of all students. The Annenberg Distributed Leadership (DL) project was one of the first efforts in the nation to deliberately take on the challenge of designing and implementing a concerted effort to build distributed leadership capacity in a diverse set of urban schools to improve the quality of teaching and learning.

The DL project featured the careful selection of leadership team members to identify and lead instructional improvement efforts; ample professional development to build cohesive teams and help members understand the motivational, psychological, and pedagogical aspects of advocating instructional change; resources to apply to the task; and ongoing school-based coaching to guide leadership team efforts.

This report describes the Consortium for Policy Research in Education's mixed-method evaluation of the DL project. The evaluation featured a cluster randomized control trial, where schools first agreed to participate in the study, and then were chosen by lottery to participate in the DL project or serve in the comparison group. Overall there were 16 DL schools and 21 comparison sites in the evaluation. The central evaluation findings, detailed in this report, are:

- The DL project successfully identified and developed leadership teams that were significantly higher functioning than were leadership teams in the comparison schools.
- Principals and team members forged new working relationships that productively expanded the leadership capacity in the participating schools.
- Teachers developed leadership capacity and took on leadership roles on their teams and with their colleagues.
- Team members worked strategically to change instruction through a variety of approaches and targeted a variety of areas that they determined to be their school's greatest needs.
- Case studies showed several examples of leadership team members exerting influence with other teachers and positively influencing instruction.
- There was evidence of positive impacts on the instructional practices of teachers who were the targets of team member action plans.
- There were no detectable widespread gains in measured student outcomes. This was likely due to a combination of factors, including the indirect relationship between leadership behaviors and student outcomes; changes in district policy and leadership that weakened the instructional system; and the focus of teams' instructional improvement efforts, which were based on local need and did not always align with tested subjects.

The DL project demonstrates that an intensive effort to influence and expand the leadership capacity of schools can have a positive impact on leadership practice, leadership team functioning, and support for instructional improvement. It further suggests that distributed leadership might be best thought of not as a reform in itself, but rather as a means of implementing reform.

I. Introduction

Over the past decade, school reformers have moved away from focusing on the school principal as the sole leader of school improvement towards a broader conception of how a range of school members might work together to deepen and support improvements in teaching and learning. Leadership frameworks are taking a more distributed perspective that views leadership coming from a broader array of school actors (Gronn, 2008; Spillane, 2006). A distributed conception of school leadership not only accounts for each of the elements of leadership—leaders, followers, and the situation—but specifically attends to the interactions amongst them (Spillane, Halverson, and Diamond, 2001). From the distributed perspective, leadership is not defined by position but by influence on those who conduct the day-to-day work of schooling. Those engaged in the work are practicing leadership, regardless of their position. While the distributed perspective has yielded a richer, more varied theory of leadership practice, questions remain about how to apply these lessons to the specific development of leadership interventions and the assignment of leadership responsibilities in schools.

The DL project operationalized a distributed perspective of leadership, with the goal of creating a stronger leadership structure to facilitate school improvement in urban schools. The project was funded by a generous grant from the Annenberg Foundation to the Penn Center for Educational Leadership (PCEL) in 2005. The goal of this ambitious project was to use a distributed perspective of leadership to reshape the organization and practice school leadership.

PCEL developed a comprehensive set of leadership training for developing effective school leadership teams and supported their efforts to enact instructional leadership in their schools. From 2006 to 2010, PCEL worked with three cohorts of school leadership teams from schools in the School District of Philadelphia. Each cohort received extensive professional development during its first year, in addition to 10 hours per week of coaching. Coaching continued in subsequent years, as did participation in a more limited set of professional development activities.

Training focused on areas such as distributed leadership theory, developing professional learning communities (PLCs), analyzing data, peer coaching, emotional intelligence, and leadership for literacy and mathematics. Project-trained coaches worked with the leadership team in each school to build their team functioning, identify instructional needs in their schools, and to enact reforms to improve teaching and learning. During the four years of the grant, 16 schools participated in the DL project: nine elementary schools, one middle school, and six high schools. Participating schools included some of the largest schools in the district as well as small neighborhood schools; selective magnet schools and low-performing comprehensive high schools.

From its inception, the Consortium for Policy Research in Education (CPRE) at the University of Pennsylvania evaluated the DL project. CPRE's mixed-method evaluation combined surveys, interviews, focus groups, analysis of video of school leadership team meetings, and student test performance. The evaluation featured a cluster randomized control

trial whereby schools first agreed to participate in the study of distributed leadership, and from this pool were chosen by lottery to participate in the program or serve as a member of the comparison group. In addition to the 16 DL schools, an additional 21 schools served as comparison sites for the evaluation.

This report summarizes the story of the DL project and findings from the evaluation. First we provide an overview of the project's goals and design. Second, we describe the evaluation theory of action. Third, we introduce the evaluation design and data sources for our research. Fourth discuss the range of findings from the evaluation. These include: (a) an analysis of the effectiveness of the leadership team selection process, (b) a description of the development of leadership teams in schools, (c) a micro analysis of the work of the DL teams, (d) a reporting of the experimental impacts of the project on school leadership teams, (e) a qualitative analysis of the leadership team member strategies to enact instructional leadership in their schools, (f) case studies of leadership team action plans, and (g) the impacts of action plans on school faculties. The report concludes with a discussion of implications from the evaluation.

II. The Distributed Leadership Project Goals and Design

The Distributed Leadership project was the vision of John DeFlaminis, the Executive Director of the Penn Center for Educational Leadership, who developed a model of distributed leadership in practice and convinced the Annenberg Foundation, then with offices outside of Philadelphia and a history of supporting the School District of Philadelphia, that this was an idea worthy of support. Once funded, he was joined by Jim O'Toole as the project's assistant director. Both DeFlaminis and O'Toole were former school superintendents who were passionately committed to urban education reform who understood the value of expanding the foundation of school leadership capability and were convinced that putting distributed leadership into practice was an important component of school reform.

The overarching goal of the DL project was to build instructional leadership capacity in schools for the purpose of improving teaching. The theory of distributed leadership views leadership as an emergent property of schools; building instructional leadership capacity is therefore a school-wide endeavor. To accomplish this, the project first created leadership teams that were intended to be instructionally focused, collaborative, and strategic. The goal was for teams to identify and prioritize school needs, define the leadership work necessary to address those needs, and establish feedback systems to monitor their progress. The project designers believed that team members were best situated to assess the needs of their school and that intrinsic motivation, not external authority, would drive individuals to achieve excellence. Thus, an important part of the project's philosophy was to allow leadership teams the flexibility and autonomy to assess the needs of their school and determine how best to improve instruction. The teams first worked to identify and prioritize overall needs for their schools. To make roles and responsibilities clear, each team member developed individualized instructional change goals and action plans to achieve those goals. Individual team member action plans were thus nested within a broader vision of school improvement. With coaching from the project, they also sought opportunities to support instructional improvement and encourage leadership from other teachers.

According to the project's theory of action (DeFlaminis, 2009, 2011) effective implementation of the DL project required that distributed leadership teams: (a) have a strong conceptual grounding in Spillane's (2006) theory of distributed leadership, (b) develop highly collaborative team functioning, (c) understand how to facilitate change in others, (d) be comfortable using data to both plan and monitor their work, and (e) focus relentlessly on instructional issues and work to positively influence the instructional practices of faculty members while engaging them in leadership work. DeFlaminis developed the project's curriculum in consultation with Spillane, who also delivered the modules focused on distributed leadership.

Even before team members were selected, they went through a multi-step application process. First, a general job description and expectations for participation on the DL team was posted for the faculty and people were asked to submit a written application explaining their interest. DeFlaminis and O'Toole then joined the principal to interview applicants and together they

selected a team that would best represent the school. Team members were provided with stipends of $3,000 for their first year and $2,500 for their second and subsequent years of participation. Teams were formed to represent many aspects of school leadership, including previous leadership experience, willingness to work with colleagues, interest in school-wide instructional improvement, and influence in the school.

To prepare and support DL teams and team members to carry out this work, the project provided schools with a rich set of leadership professional development, materials, and ongoing coaching. PCEL chose to focus training on aspects of leadership rather than instructional content because the district had indicated that it would provide school-level professional development and support aligned with its core curriculum.

Over the course of their first year in the project, DL team members received approximately 70 hours of customized professional development designed specifically for the project. Team members participated in a total of 13 modules that addressed a range of topics related to the core functions of DL teams and team members:

1) A Distributed Perspective on Leadership
2) Developing Professional Learning Communities
3) Mission and Direction: Shared Vision, Values, and Commitments
4) Emotional Intelligence
5) Building School Leadership Teams
6) Teamwork and Conflict Resolution
7) Building Bridges and Connections
8) Evidence-based Leadership and Shared Decision-Making
9) Leadership for Literacy Teaching and Learning
10) Motivation: The Key to Effective Leadership
11) Fostering Leadership in Mathematics
12) Collaborative Learning Cultures
13) Peer coaching

All the modules, delivered by experts in their respective fields, were professionally designed and included interactive seminars, a participant guide, and a facilitator guide.

In addition to direct professional development, teams and team members received approximately 10 hours per week of on-site coaching to support their work. DL coaches were retired, experienced former principals who coached in 1-2 DL schools each. DL coaches attended team meetings, worked individually with team members as needed, and provided guidance about both the processes and decisions of the teams. The project modeled the role of coaches on Neufield and Roper's (2003) coaching guidelines. These included:

- Acting as strategists and assistants in building capacity for shared decision making;
- Modeling leadership skills for team members;
- Helping team members understand the importance of recruiting teachers to assume instructional leadership roles to drive whole-school change;
- Advising the leadership teams on school administrative tasks such as scheduling and resource deployment; and,
- Helping team members organize their time so that they are able to visit classrooms regularly to observe instruction and offer feedback to teachers.

As the teams progressed through professional development, each team member was expected to create an individualized action plan that clearly stated his/her goals, strategies for reaching them, and how progress would be measured. The action plans were intended to ensure an accountable focus on instructional improvement, while allowing each team member to use their contextual knowledge and comfort level to match their capacity and perception of priority school need.

Finally, to support the change process in each school, the project provided each school with the resources for providing up to 40 additional hours of discretionary professional development to be used with the school's faculty as the leadership team saw fit. This was intended to reinforce the project's commitment to allowing the teams substantial latitude in designing and supporting their instructional improvement strategies. In their second year, after the 70 hours of training were completed, schools continued to receive support of a DL coach and new team members could attend the DL training with subsequent cohorts.

III. CPRE's Evaluation Design

In the early months of the evaluation, the CPRE research team worked with the DL project leadership to develop a programmatic theory of action to guide the work of the evaluation team. Program theories of action (sometimes also referred to as theories of change) are useful to develop a hypothesized progression of events against which to contrast the actual unfolding of a reform (Weiss, 1998).

CPRE's theory of action for the DL project is shown in Figure 1. The team's work was hypothesized to develop in three overall stages. In the first stage, represented by rows 1 and 2, the teams form and develop functional and collaborative relationships, and begin to plan for how they would work to improve instruction in their school. In the second stage, represented in rows 3 and 4, team members work with other teachers in the school on their chosen efforts to improve instruction. These interventions could occur on a variety of topics and through a range of school subgroups, including grade-level teams, PLCs, or subject-alike teachers. In the third stage, shown in rows 5-7, these efforts are hypothesized to lead to school-wide changes in the culture and practice of teachers and the learning of students. While this depiction of the project's theory of action is linear, it was understood that in reality this hypothesized sequence was likely to be overlapping, iterative, and variable both within and across schools.

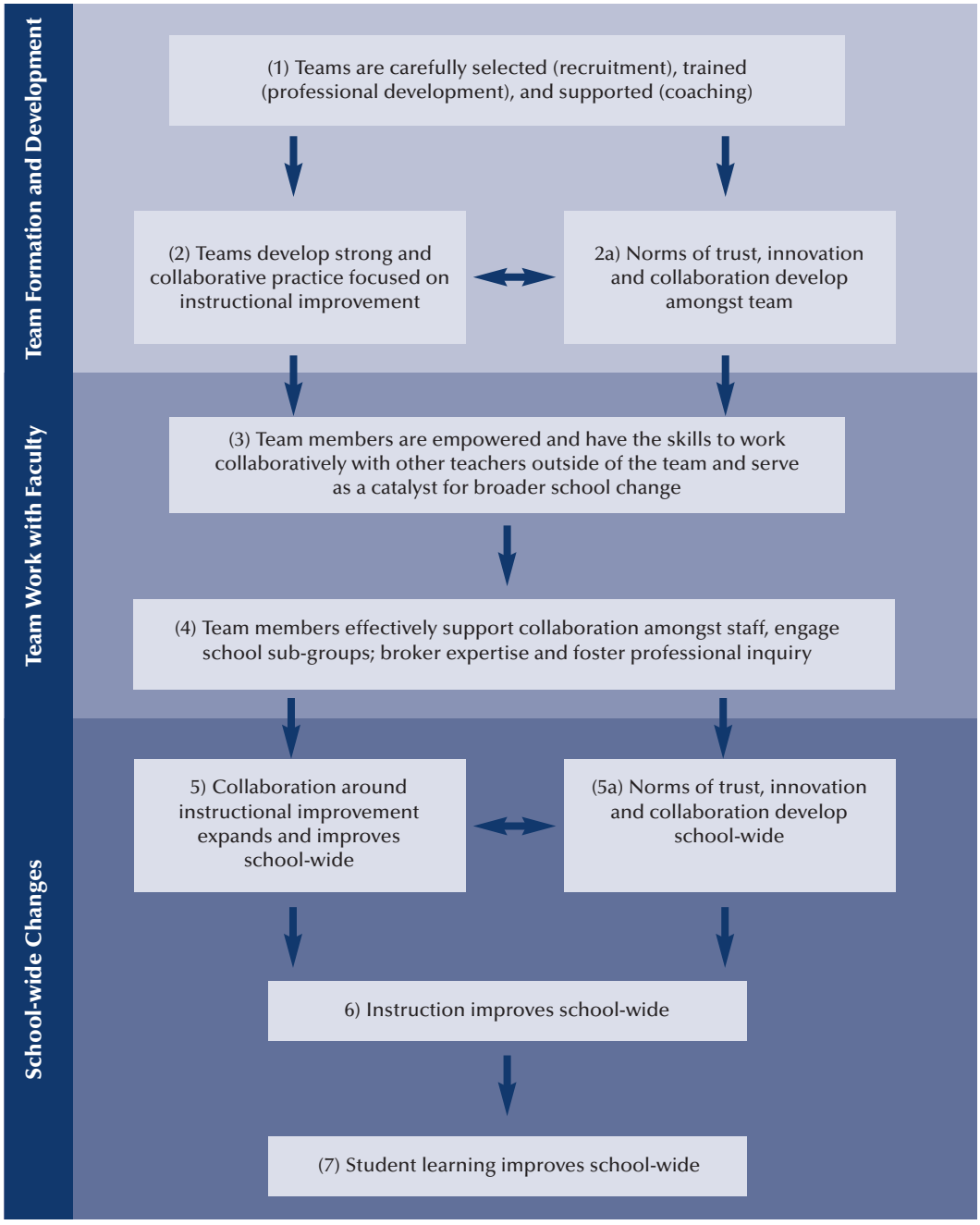
Research Questions, Evaluation Design and Data Sources

Based upon this program theory evaluation framework, the evaluation team sought to follow the progression of DL teams through their formation process; the development of their strategies to influence instruction in their schools; their efforts to work with school faculty through a variety of ways and approaches; the extent to which these efforts took root in their schools; and the school-wide effects on culture, instructional practice, and student outcomes.

More specifically, CPRE's evaluation was guided by five overarching research questions:

1. How effective was the DL project in recruiting, training, and supporting DL teams?
2. How well did the DL team members work together? What did they focus on and what challenges did they face?
3. How did team members, including principals and teachers, conceptualize and enact their roles within a distributed leadership framework?
4. In what ways did DL team members choose to make instructional changes in their schools? What challenges did they face and what were the effects of their efforts?
5. To what extent did reforms supported by DL teams influence instructional practice and student achievement?

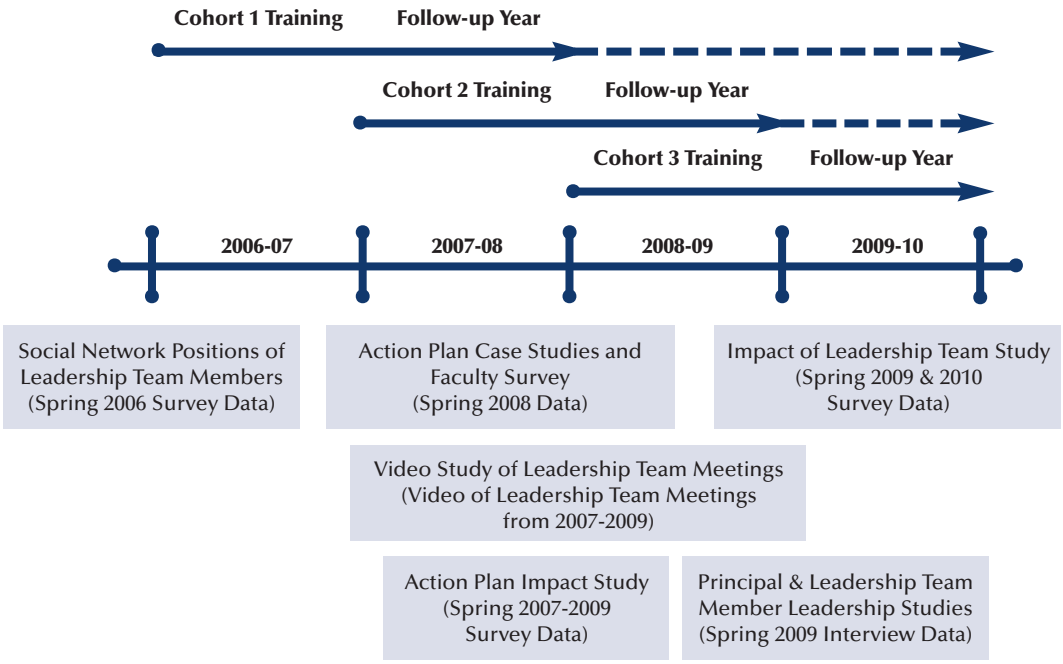
Figure 1. Evaluation Theory of Action for Distributed Leadership Project



To address these questions, the evaluation design combined both qualitative and quantitative data collection and analysis. Each spring the entire faculty of all schools (both DL and comparison) completed a comprehensive survey containing questions about school leadership, dimensions of school climate and culture, professional development, and changes in instructional practice. The survey had a subset of questions targeted specifically to the school's leadership team. Additionally, each year CPRE researchers conducted interviews with leadership team members in each of the DL schools. Trends of student impacts on the Pennsylvania state test were collected and analyzed each year for DL schools in relation to those of the control schools.

Other evaluation efforts were more targeted. In the spring before DL training began, the research team administered a social network survey to assess the place of leadership team members in their school's social network before they were even selected as leadership team members. In 2008, the evaluation team conducted targeted case studies of the action plan efforts of the four DL Cohort 1 schools. In 2008, a survey of the faculty of the first cohort of four DL schools was conducted to assess the impact of the leadership team action plan efforts. In 2007-8 and 2008-9, the evaluation team arranged to videotape a sample of team meetings of the first two cohorts of eight DL schools for a micro analysis of the patterns of strategic planning and meeting facilitation. In 2009, the research team conducted focus groups with all the school leadership teams and additional in-depth interviews with leadership teams in half of the DL schools. To help clarify the different analyses that were conducted across the life of the DL project, the analyses that make up the findings of this report are overlaid onto the chronology of program implementation in Figure 2.

Figure 2. Timeline of Evaluation Studies of DL Project



The evaluation design featured a mixed-method cluster randomized design. For the first three years of the project (2006-2009) the evaluation team held a lottery to randomly select schools to join that year's cohorts of the project. The first cohort (2006-2008) contained four elementary schools. The second (2007-2009) included two elementary schools and two high schools. The third cohort (2008-2010) contained three elementary schools, one middle school, and four high schools. Overall, 16 schools participated in the DL project. Schools which applied for the training but were not selected to participate by lottery served as a comparison control group. As an inducement for continued participation in the evaluation, schools that were not chosen by lottery for a cohort were given greater odds for subsequent participation, consequently the number and makeup of the comparison group cohort changed somewhat each year. In the final year of the evaluation, the comparison group contained 21 schools.

Table 1 shows some of the basic descriptive characteristics of the DL schools and the comparison schools. The 16 DL schools varied widely in size, ranging from a 300 student elementary school to one of the largest comprehensive high schools in the city. The DL schools varied in their student composition as well. The schools largely served Black students, but there were schools that were majority Asian, majority White, and that had a substantial proportion of Hispanic students as well. On average, the DL schools had 75% of their students receiving free- or reduced-price lunch, although this ranged from 33% to 92%. Further demographic details of the DL schools are shown in Appendix A.

Table 1. Demographic Statistics of DL Schools and Comparison Schools, 2008-09 (with standard deviations in parentheses)

		No. of Schools	Average # of Students	Average Student/ Teacher Ratio	Pct. Asian	Pct. Black	Pct. Hispanic	Pct. White	Pct. Receiving Lunch Assistance
Distributed Leadership Schools	**All**	16	808 (609)	16.75 (2.79)	.10 (.14)	.74 (.29)	.11 (.11)	.12 (.17)	.74 (.19)
	ES	9	611 (270)	16.44 (2.65)	.15 (.18)	.72 (.32)	.11 (.09)	.14 (.20)	.82 (.09)
	MS/HS	1/6	1060 (980)	17.14 (3.13)	.07 (.09)	.77 (.27)	.10 (.13)	.10 (.11)	.60 (.24)
Comparison Schools	**All**	21	488 (226)	14.38 (2.18)	.10 (.08)	.69 (.31)	.14 (.22)	.10 (.20)	.62 (.28)
	ES	16	456 (167)	14.44 (2.06)	.11 (.09)	.68 (.33)	.13 (.22)	.13 (.23)	.68 (.17)
	MS/HS	2/3	591 (365)	14.20 (2.77)	.09 (.07)	.73 (.28)	.16 (.24)	.04 (.04)	.51 (.53)

Source: National Center for Educational Statistics, 2008- 2009

Comparing the DL schools to the comparison schools, we can see that the DL schools were larger, had a higher student/teacher ratio, and were poorer (as measured by lunch assistance). The racial/ethnic compositions of the students in the two groups of schools were roughly similar. Further, we can see that these trends of similarities and differences between the two samples followed similar patterns in a breakdown of the schools into elementary and secondary schools.

IV. Evaluation Findings

The remainder of this report summarizes key findings from the evaluation, focusing first on the project's impact on DL teams, and then on the broader school. The first section, *Building High-Functioning Leadership Teams*, focuses on the project's efforts to recruit, train, and support DL team members; the ways in which team members adjusted to their new roles; how the teams worked together in meetings; and, the extent to which the project impacted leadership team effectiveness. The second section, *Learning to Influence: Distributed Leadership Team Members as Catalysts for Change*, focuses on how both principals and teachers sought to effect change in their schools, how this work changed their roles or perceptions of themselves, and the challenges they faced in doing this work. The third and final section, *Leading School-Wide Change*, analyzes the ways in which the larger faculty was influenced by DL team efforts. This section focuses on the efforts and impacts of team member action plans, which were a key structural feature of the project's effort to improve instruction. We provide an overview of the focus of team member action plans, case studies of the action planning process, and evidence of the effects of action plan efforts on student outcomes. The report concludes with a discussion of the project and what we can learn from the initiative.

1. Building High-Functioning School Leadership Teams

Building high-functioning leadership teams was central to the overall strategy of the intervention. The teams were intended to determine the overall direction for the school and its instructional priorities, while individual team members were expected to facilitate instructional change in their buildings. This required that the teams collaborate effectively and maintain a focus on instructional change. Data from a variety of sources indicated that, through a combination of careful selection of team members, professional development and coaching, the DL project was very effective in building high-functioning leadership teams. In the remainder of this section we highlight findings from survey, interview, and video data analysis indicating that teams were well selected, that team meetings were collaborative and capitalized on teacher expertise, and that team effectiveness was impacted by project participation.

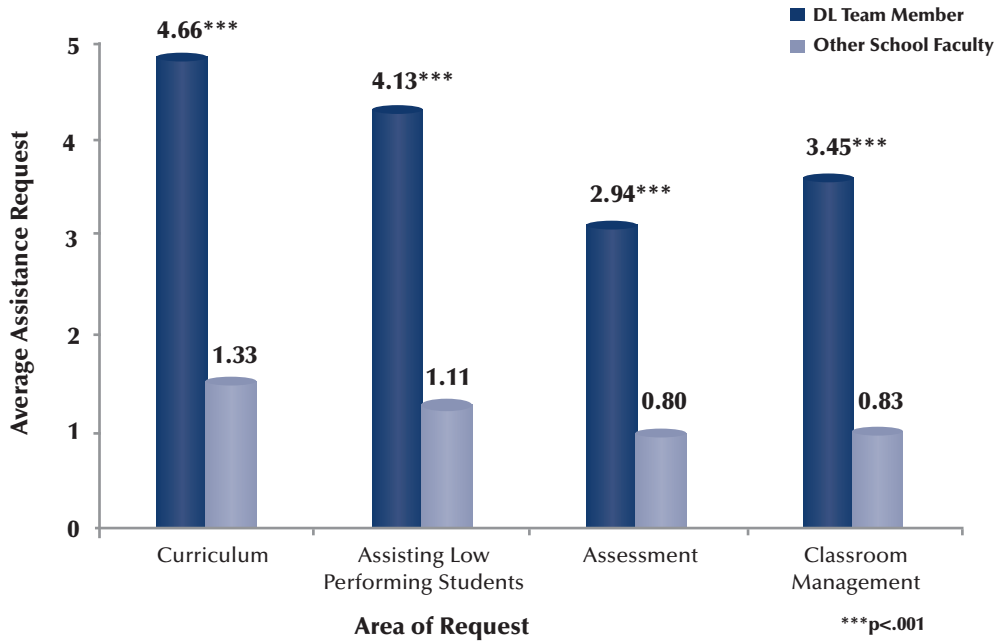
Effectiveness of the Leadership Team Selection Process

The strategic recruitment of strong leaders is seen as an increasingly important component of school improvement strategies (Fullan, 2002; Huber & Pashiardis, 2008). The DL project took particular care to select faculty members to join the DL teams. Faculty members had to complete a written application to be considered for the team and were interviewed by the project's director, assistant director, and the school principal. Principals always had the final say in final team composition. Successful recruiting of team members was an important ingredient of the ultimate effectiveness of the leadership team to enact changes in their school.

In one of the early evaluation studies (Cole, 2009), we compared the influence of future DL team members to that of the rest of the school faculty. The theory underlying our investigation was to assess the social capital of leadership team members as potentially influential leaders in their schools. Theorists of social capital (Coleman, 1990; Lin, 2001) suggest that individuals who possess social capital have important resources to facilitate change.

These resources include higher levels of expertise, trust, reliability, and other resources that colleagues value (Supovitz, 2008). This component of our research utilized an investigative technique called social network analysis, in which we surveyed all faculty members in each school to identify the individuals they went to for instructional advice and assistance. This technique is particularly appropriate for examining distributed leadership because it identifies influential individuals in a school regardless of their position or title within the organization. Our survey data came from the baseline data collected before teachers were selected to participate on the DL teams. Our survey questions asked all teachers in the schools who they went to for advice in four instructionally relevant areas: curriculum, assessment, classroom management, and working with low- performing students. The data were then analyzed after team members were identified to participate on the DL teams. Our analyses compared the requests for assistance of future DL team members with that of the rest of the faculty in the schools about to start implementing DL.

Figure 3. Comparison of Advice Requests of Future Distributed Leadership Team Members in Comparison to Other School Faculty Members



A summary of the results of the analyses are shown in Figure 3. Overall, we found that the faculty members subsequently chosen to be DL team members were significantly more likely to be asked for advice from colleagues than other faculty members in their schools in each of the areas we examined. For example, future DL team members were named by an average of 4.66 colleagues as individuals they went to for curricular assistance, whereas other faculty members received, on average, requests for assistance from 1.33 colleagues. The patterns were similar across the other topical areas that we examined, where DL team members receiving advice requests from an average of three to four times more colleagues than other faculty members in their schools. This suggests that the project's selection process was effective in identifying influential faculty members to serve on the DL teams and that the selected DL team members were well positioned to influence their peers through their work as school leaders.

The Development of Distributed Leadership Teams

Early on, as teams sorted out their purpose and settled into their relationships, they often struggled with ambiguity, role redefinition, and learning to work collaboratively. In most cases, this phase passed as teams clarified their work. Part of the early adjustment was figuring out how to develop working relationships with each other. In many cases, principals were used to taking charge and team members had to acclimate to different roles. As one team member described,

> I think in the beginning it was still a little top-heavy, you know, [the principal] would tell us what we had to do, and we would pretty much do it…And I think as time went on, it's been distributed a little more evenly. So everyone has the opportunity to lead, everyone has the opportunity to have suggestions of where we should go…and we're not afraid to express when we have some concerns or things like that.

In other cases, teacher team members had to become comfortable with projecting their own voice on non-classroom matters. Moreover, the teams had to figure out where to redraw the boundaries between the things for which administrators had formal responsibility within the district's authority structure and those things for which the team could assume responsibility.

Another part of team adjustment was figuring out what to prioritize in their efforts to improve instruction in the school. Leadership teams typically examined their student performance data, but found that, while the data presented a clear picture of their school's results, the data offered few clues about what to prioritize and emphasize. As one elementary school team member described:

> It took us a while at the beginning to figure out what we were supposed to do and how we were supposed to organize ourselves to do it. Looking back, I think it was part of the design of the program that they didn't just give us a recipe to follow. We had to take ownership of the work as a team and develop good relationships amongst ourselves. It took us a while to figure it out, and we had some frustrating times along the way, but in retrospect it helped us develop as a team.

This perspective reflected the project designers' belief that the teams had to construct their own definition of their school's needs, rather than being told on what to focus. While it was common for teams to feel uncertainty in their first 6-9 months, almost all the teams developed functional working relationships, strategies and action plans to improve instruction in their schools.

In addition to simply having time to get to learn to function collaboratively as a leadership team, team members noted that the project provided critical supports that enabled teams to develop over time. The initial training on the concept of distributed leadership was itself an important catalyst for some team members, as they realized that this process would require them to approach their work in new ways. For teachers this entailed stepping into a more visible role with their colleagues. For principals it implied the reverse—letting go of some of the traditional control in order to create space for others to step in.

While interview and survey data revealed high levels of satisfaction with all of the professional development provided by the project, two areas stood out as being especially influential on team development. The first was a series of sessions (some school-based) that focused on different aspects of team functioning, including goal setting, communication, trust building, and interpersonal dynamics. Teams in their first year of the project participated in training on creating a shared vision, emotional intelligence, team building and conflict resolution. Some teams also chose to allocate professional development resources in their own buildings to build trust, both among team members and with the wider faculty. One principal noted that underlying racial tensions that most people were unaware of emerged during a school-based professional development session, while a teacher from a different school highlighted readings and professional development on team functioning as a critical turning point in getting the DL team to gel.

The second area in which professional development appeared highly influential relates to using evidence to plan and inform decisions. A series of sessions focused on evidence-based decision making clearly influenced team practice in this area, as did continual reinforcement from DL coaches. As DL teams grew accustomed to working with one another, they frequently mentioned maintaining a focus on data as being one of the defining features of the team. "Distributed leadership has made us more focused on checking students' data, looking more into the benchmarks, and looking at the standards there," one teacher leader commented. "And seeing how it can be important, even though sometimes some teachers don't want to look at that. But it's a good gauge. And it helped us to know where we were, where we are now, and where we need to go," she said.

Teams also learned the importance of keeping the rest of the school's faculty informed about the purpose of the team during its early efforts to develop working relationships within the team. In those early times, after DL had been publicized and the team was meeting regularly, attending professional development and planning its initial efforts, there was a lot of curiosity and even jealousy from members of the faculty. As one high school team member described,

> Somehow I feel we got off to an uneasy start in the first year. While we were trying to figure it out ourselves, we didn't communicate with the rest of the faculty. And they were saying 'What the heck's going on here?' And rumors were flying about what we were planning to do. So it took us a while to kind of dispel this, whatever thoughts they had about the DL team.

By keeping the faculty informed about the team and its purposes, the team members found that their meetings were less mysterious for others and that their colleagues were more receptive when they reached out to them.

In addition to new knowledge and skills introduced through professional development, DL team members also noted the role of the DL coach in helping to keep the team focused and on track. While coaches did not appear to have a heavy hand in setting direction for the teams, they did appear to play an important role in holding them accountable for making progress towards their self-defined goals. Several DL team members stressed that this was a very useful role. "[The coach] really helps keep us focused," one team member commented. "He really keeps us on track, because we do get off on tangents a lot, especially in meetings. And there's time we just need to sit down and look at the bigger picture of things and make decisions on what we're going to keep, or what we're going to work with, or what we're going to do." In this way, coaches played a strategic role keeping teams focused.

A Close-up Look at How Distributed Leadership Teams Work

To better understand how the DL teams worked together, we analyzed video of 88 team meetings from eight schools, focusing on the first two cohorts of schools over a two-year period from 2007 to 2009. For Cohort 1 schools, this period covered their second and third years in the project, while for Cohort 2 schools it included their first and second years.

For analytic purposes, each meeting was divided into segments of conversation, organized by topic. For each segment we noted what the team was discussing, what kind of work the team was doing, and which team members were leading the discussion. If the teams were working in a manner consistent with the project's goals, we expected to see different team members in leadership roles, both within and across meetings. Further, we expected a significant amount of discussion to be strategic (i.e., consideration of how to go about achieving goals), and to be focused on instruction or instructional support (e.g., professional development or PLCs).

Overall, descriptive data from the video analysis was consistent with these expectations. On average, teachers assumed leadership roles in team meetings 57% of the time. Principals led the conversations in 26% of the team meeting time, while coaches led the conversation in 29% of the time.

The analyses of the video segments also indicated that team discussions were generally focused on five particular topics, as shown in Table 2. The three most common topics of discussion were professional development (27%), which referred to formal professional learning opportunities; professional culture (23%), which referred to professional norms, routines, or practices within the school; and instruction (19%), which referred specifically to teaching practices. These were closely followed by assessment, which usually referred to state standardized tests (15%), and data use (14%), which encompassed discussions of information about student learning.

Table 2. Topic of Discussion, by Percent of Meeting Time

Topic of Discussion	Percent of Meeting Time
Professional development	27
Professional culture	23
Instruction	19
Assessment	15
Data use	14
District business/policy	9
Discipline	5

Note: Discussions could be coded in multiple topic areas.

The analysis also examined team process, that is, what kind of work the team was engaged in during meetings. As shown in Table 3, the largest portion of the teams' work was strategic (38% of observed time); that is, figuring out the best way to go about achieving a given goal or result. The teams also spent substantial time discussing monitoring or evaluating their efforts (31%) and coordinating or planning activities (28%).

To further analyze the extent to which the teams focused on instructional change, we assessed the prevalence of teams' working strategically while they were discussing professional development, instruction, or PLCs. Essentially, we were looking at situations where the team discussed strategy for either changing instruction directly or changing the support systems for teaching. These "instructional change strategy" (ICS) conversations comprised roughly 37% of all team meeting time.

Table 3. Team Process, by Percent of Meeting Time

Team Process	Percent of Meeting Time
Strategy	38
Monitoring/evaluation	31
Coordination/planning	28
Problem identification	13
Dissemination	12

Note: Discussions could be coded in multiple areas.

Qualitative analysis of these segments revealed that ICS discussions had three main characteristics. First, they provided an opportunity for candid conversation among teachers and administrators. In order for teams to decide what they should focus on and how, it was important for them to be able to reflect on what seemed to be working and not working in their buildings. The nature of these discussions was highly collaborative. Teachers offered guidance to administrators about how best to communicate with the faculty, while principals worked to figure out where their involvement in addressing instruction was needed and where teacher involvement might be more productive.

Second, DL meetings provided an opportunity for the teams to reflect on how new ideas and practices might be introduced in their buildings. It was not uncommon for teams to use meeting time to debrief professional development in which they had participated, focusing on how team members might (or might not) utilize what they had learned in their own schools or classrooms. What was most significant about these discussions was the fact that the teams had structured opportunities to reflect on why and how a given training experience was useful in the context of their school. This question of applicability is a natural precursor to discussions of how to introduce key ideas at the school level—a critical link between the support received by DL teams and the work they did in their schools.

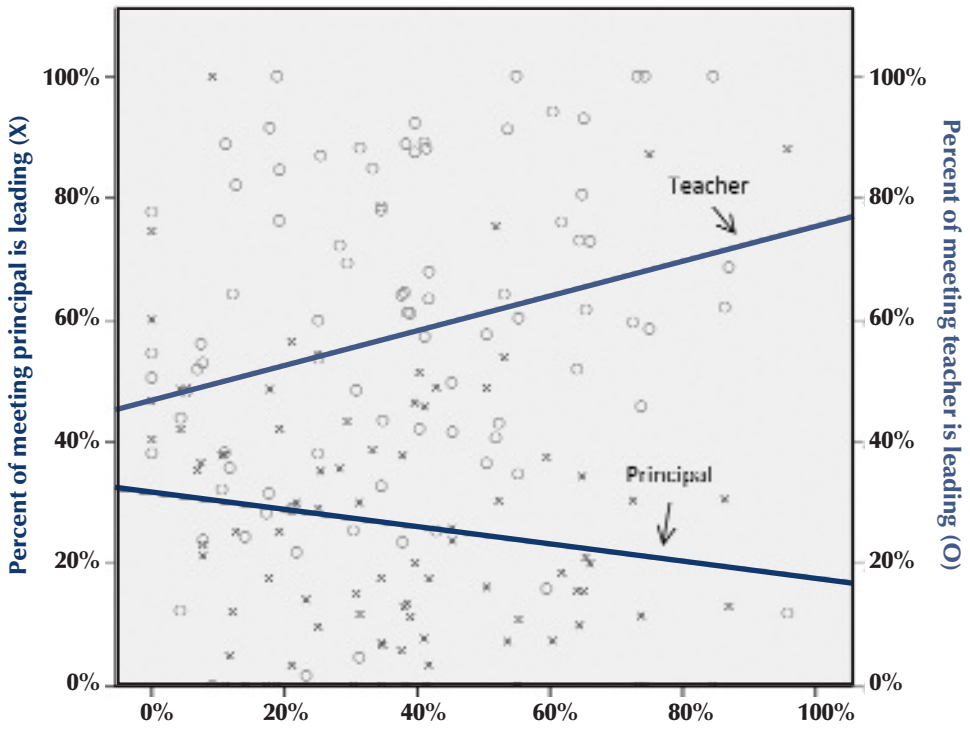
Third, and perhaps most importantly, DL team meetings created a venue in which teachers' classroom expertise was treated as a valued asset. This was in part made possible by the fact that teachers could speak freely with administrators about what they thought was or was not working. But administrators and coaches also worked to steer the discussion in directions that would foreground teacher expertise.

DL team meetings created a venue in which teachers' classroom expertise was treated as a valued asset.

Across cohorts and years, teachers were more likely to lead ICS conversations than principals or coaches. One way to make this comparison is to look at the percentage of time in each meeting that DL teams spent discussing instructional change compared to the percentage of time during which different team members were leading.

Figure 4 plots both teacher and principal leadership against the amount of time spent discussing instructional change in each meeting. Two relationships are readily apparent from the figure. First, among both teachers and principals, there was a high degree of variation in who was leading meeting segments. Second, meetings with a higher degree of teacher leadership had more discussion about instructional change, whereas those with higher amounts of principal leadership were less likely to be focused on instructional change.

Figure 4. Instructional Change Strategy, by Leadership



Meeting leadership by role can be seen first by looking just at the Xs and Os in the figure and comparing them to the y-axes on the left and right sides. From this perspective, the Xs represent the proportion of that meeting that was led by the principal, while the Os represent the proportion of a given meeting which was led by a teacher. On average, principals led team discussions 26% of the time, with a standard deviation of 22%. Teachers led an average of 57% of meeting discussions, with a standard deviation of 25. Thus, while teachers led a majority of the meeting segments, there was wide variability in who was leading, depending on segment topic.

Figure 4 also demonstrates the relationship between meeting leadership and the percentage of meetings focused on instructional change. These can be seen by looking at the percentage of meetings discussing instructional change (on the x-axis) and the discussion leader. The upwardly sloping line shown in the figure reflects the positive and significant correlation ($r=.259$, $p=.015$) correlation between teacher leadership and the percentage of a meeting devoted to instructional change conversations.

The relationship between principal leadership and the percentage of the meeting devoted to instructional change conversations was slightly negative, although not statistically significant ($r=-1.44$, $p=.182$). Although not displayed in the figure, there was also no relationship between coach leadership and the meeting's instructional focus ($r=.012$, $p=.914$).

Further, analyses of the data longitudinally suggested that as DL teams matured, the amount of meeting time spent on ICS increased while the portion of those discussions that were led by principals diminished. This pattern was evident across two years of observation for both cohorts of schools that were examined. The more experience a DL team gained, the more it engaged in strategic, instructionally focused work, and the more likely it became that teachers led those discussions.

In sum, DL team conversations were noteworthy in three ways. First, they were democratic: nearly every team member contributed in nearly every meeting. In the context of team meetings, teachers and administrators engaged as equals. Second, the DL teams demonstrated a willingness and ability to delve into the local details and nuances of teaching and learning in their schools; the teams analyzed needs and strategies in the context of the current state of affairs in buildings and classrooms. Their work was more likely to unfold from a review of local conditions than mandated from outside or above. Finally, this analysis suggests that a distributed perspective in general and the use of leadership team meetings in particular may help create opportunities for teaching expertise and authenticity to come to the fore, serving as a critical asset to leverage instructional change. In an era where maximizing human capital is critical to both the scale and sustainability of instructional improvement efforts, routines or tools that help leverage that capital may play a critical role in the design and implementation of future instructional improvement efforts.

The Project's Impact on School Leadership Teams

The next analysis of school leadership teams focused on examining the project's impact on their effectiveness. To do this we compared school leadership team members' reports of meeting effectiveness in the DL schools to that of the leadership teams in comparison schools. This component of the evaluation took advantage of the randomized control trial in which schools who volunteered were assigned by lottery to participate in the DL experience or serve as comparison schools. Overall, survey data from the leadership team members of 37 schools (16 DL schools and 21 comparison schools) from 2009 and 2010 was used in the analysis.

In this part of the evaluation we focused on addressing three questions. First, what differences, if any, were there in leadership team functioning between schools participating in the DL project and comparison schools? Second, what individual participant characteristics and team characteristics were related to effective leadership team functioning? Third, were the results consistent in 2009 and 2010?

Table 4. Number and Percent of Leadership Team Members by School Participation Status

Role	2009 DL Schools (n=16)	2009 Comparison Schools (n=21)	2010 DL Schools (n=16)	2010 Comparison Schools (n=21)
Total Participants	92	105	86	106
Average Team Members Per School	5.75	5.00	5.34	5.05
Total Number of Administrators	21 (23%)	28 (27%)	18 (21%)	22 (21%)
Total Number of Teachers	61 (66%)	59 (56%)	52 (60%)	51 (48%)
Total Number of Others	10 (11%)	18 (17%)	16 (19%)	33 (31%)
Average Years of Team Member Educational Experience (with standard deviation)	16.07 (10.81)	13.55 (10.26)	16.05 (11.13)	15.93 (9.87)

The team compositions were similar across both years we examined. These data are shown in Table 4. The 2009 sample consisted of 197 leadership team members in the 37 schools. Of these, 92, or 47%, were leadership team members in the DL schools, while 105, or 53%, were leadership team members in the comparison schools. The 2010 sample contained 192 leadership team members. Of these, 86, or 45%, were leadership team members in the DL schools, while 106, or 55%, were leadership team members in the comparison schools. Team size averaged about five members per school. About a quarter of team members were administrators, about 50-60% were teachers, and about 10-30% of the team members helped other positions, including subject coordinators, counselors, and other non-teachers. In both years the DL school leadership team members were more experienced than their counterparts in the comparison schools.

The outcome variable for these analyses was leadership team functioning. Our representation of leadership team functioning was made up of eight survey items that solicited leadership team member opinions about a range of leadership team processes, decision-making, team member interactions, and the level of participation amongst team members. For example, specific items asked the extent to which members of the leadership team are willing to question one another's views; members of the team work together closely to lead this school; and power to make decisions is shared among members of the leadership team.

We used two sets of survey data to predict leadership team functioning. The first set focused on characteristics of the individual leadership team members. These included: (a) *Individual influence,* a measure of the extent of individuals' involvement in a variety of school-related decisions around school staffing, policies, and planning; (b) *Data use*, which assessed the extent to which individual leadership team members used either data for both classroom and/or school-wide improvement; and, (c) team members' *years of experience* working in schools.

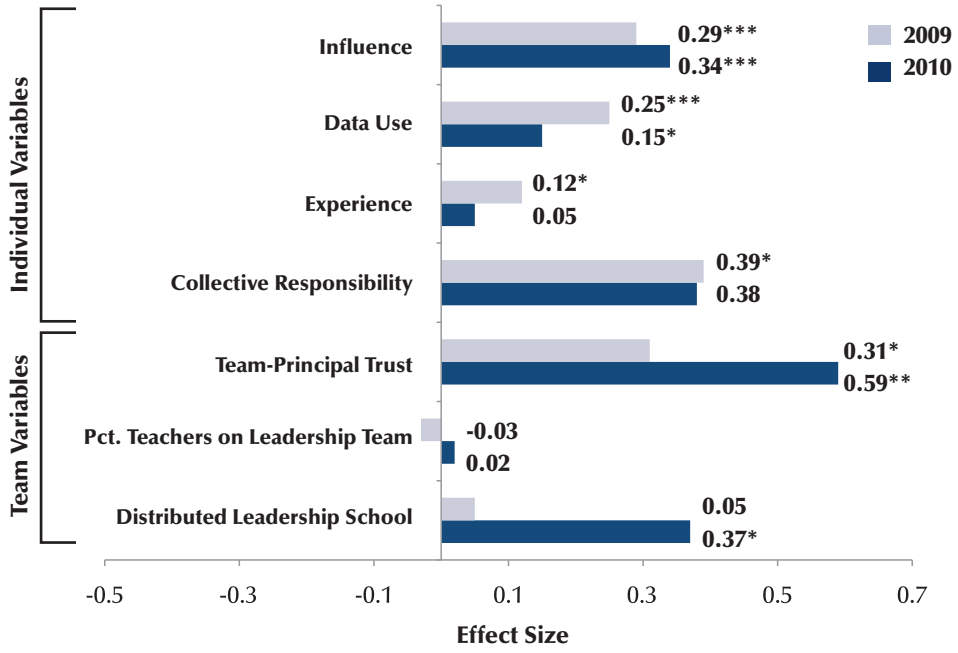
The second set of predictors contained characteristics of the leadership teams. These were: (1) *Collective responsibility*, a measure of the level at which the leadership team members collectively felt responsible for the broader school environment beyond their specific assignments; (2) *Team-Principal Trust*, a measure of the level of trust and confidence between team members and the school's principal; (3) *Percent of teachers* on the leadership team, the proportion of teachers to administrators on the leadership team, and; (4) *Distributed Leadership team*, a dichotomous variable identifying whether the team had participated in the DL project or whether they were a leadership team in a comparison school.

The analyses employed multi-level modeling to account for the nested relationship of team members within leadership teams. All variables in the models (both the dependent variable and the independent variables) were standardized, with the exception of the dummy variable for DL school. This allowed for comparisons both across the variables with years and across years.

The results of the analyses are summarized in Figure 5. The white bars in the graph show the standardized regression results for 2009, while the black bars show the results for 2010.

Looking first across the three individual leader characters we see that in 2009 and again in 2010, both individual feelings of influence and data use are associated with individual reports of higher levels of leadership team functioning. More experienced team members reported higher levels of team functioning in 2009, but there was no relationship between experience and team functioning in the 2010 data. Because the results are standardized, we can also see that, of the individual level characteristics, perceived influence is most strongly associated with leadership team functioning.

Figure 5. Summary of Relationships between Individual and Team Characteristics and Leadership Team Functioning



At the team level, the effect of collective responsibility on team functioning was large and positive in both 2009 and 2010. However, collective responsibility was not significantly related to effective team functioning in 2010, due to high variability in responses. In both 2009 and 2010, trust between team members and the principal was significantly associated with effective team functioning. The magnitude of this effect in 2010, at .59, was the largest effect across all the variables analyzed. There was no relationship between the percentage of teachers on the leadership team and team reports of effective functioning in either 2009 or 2010.

Finally, the findings indicate that the school leadership teams which participated in the DL project (as indicated by the team variable 'Distributed Leadership School') had significantly higher levels of leadership team functioning in 2010 than did the comparison schools, but there were no significant differences in leadership team functioning in 2009 in the DL schools compared to the non-DL schools. More specifically, in 2010, being a leadership team in a DL school was associated with a .37 standardized effect size difference in leadership team functioning. According to standard conventions, this is a moderate sized and robust effect.

Thus, the overall findings indicate that the school leadership teams which participated in the DL project had significantly higher levels of leadership team functioning in 2010 than did the comparison schools, but there were no differences in leadership team functioning in 2009. This could be due to their increasing maturity and coherence as they spent more time working together. There were also several individual- and team-level characteristics that were significantly associated with leadership team functioning across both years. Team members' reports of both involvement in school decisions and use of data were both significant predictors of higher levels of leadership team functioning in 2009 as well as 2010. Levels of team-principal trust were also a significant predictor of leadership team functioning in both years.

Summary of Findings about Building High-Functioning Leadership Teams

- The Distributed Leadership Project was effective in identifying and recruiting influential staff members to participate on DL teams. Therefore, DL team members were well positioned to influence their peers through their work as school leaders.
- In meetings, teachers played a critical role in facilitating and deepening DL team discussions about instructional change.
- The project purposely allowed teams to develop their own mission and identity. This resulted in teams struggling early on to clarify their purpose and emphasis. After about 6-9 months, most teams developed functional working relationships and strategies to improve instruction in their schools. Further, DL team meetings tended to focus more on instructional change over time.
- The three most common topics of team discussion were professional development; professional culture of the school (i.e., norms, routines, and practices); and instruction. Team work was predominantly strategic, or focused on the best way to achieve a goal; a third of their time was focused on monitoring or evaluation.

- Analysis of video of team meetings over two years showed that conversations were most commonly led by teachers (57%), while principals led 26% of conversations and coaches 29%. Additionally, teachers were significantly more likely to lead meetings more focused on instructional improvement.
- Finally, and most powerfully, experimental analyses comparing the leadership teams of the DL schools to those of the comparison schools showed that participating in the DL project caused leadership teams to function more effectively in 2010, after all cohorts were in at least their second year in the project.

2. Learning to Influence: Distributed Leadership Team Members as Catalysts for Change

While the DL project concentrated its resources on developing the school leadership teams, the larger goal was for those teams to effect change more broadly within their schools. As described above, there is ample evidence that the project positively influenced the ways that DL teams worked. This section examines how DL team members— principals, teachers, and other administrators—sought to influence others in their buildings. We first explore how principals thought about their role as school leaders in DL schools. Next, we describe team member strategies for engaging their colleagues. We then turn to the work of teacher leaders and examine the ways that they thought of influencing their peers.

The Role of Principals in Distributed Leadership Schools

How do principals' roles change in schools implementing distributed leadership? In what ways do they continue to exert influence as decision-making power is shared amongst leadership team members? Using interview data from the principals and leadership team members of schools participating in the DL project, we examined how principals viewed changes in their roles and the strategies they used to exert leadership in their schools. We found that as principals' roles shifted from the central decision-maker to a contributing decision-maker, they exercised their influence in a broader range of ways by organizing, empowering, and monitoring the leadership activities of others. This adjusted, and in many ways expanded, their sphere of influence in their school. Thus, the principal remained a central actor, but their role shifted; they remained influential, but exerted their leadership in different ways.

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How principals viewed changes in their roles

Overall, principals described how their exposure to theories about distributing leadership and the training of the DL project spurred them to rethink their role as a leader of their school, their views of leadership, and their empowering of others. This is not to say that all the principals in the project dramatically changed their perspectives and roles; some principals came into the project sympathetic to the idea of sharing leadership and found the training provided them with strategies to carry out their preferences. A few principals, used to operating in a more traditional hierarchy, were more reluctant to delegate responsibilities to others and made only halting steps in that direction.

Consistent with the concept of distributed leadership, several principals described themselves less as the central authority in their building and more as an orchestrator of responsibility. According to one principal:

> I observe more. The decisions are made within our group. My team feels comfortable coming to me when we have to make decisions. But my job is not to take over the DL team; my job is to make sure that my DL team is working collaboratively with each other.

This principal saw her role as fostering an environment in which effective collaboration could take place.

In a similar vein, an administrator in a high school described how her school's principal viewed the work of the school as a collective product. "Her [the principal's] favorite line is always, 'Listen guys, it's going to be a group photo, so good or bad, we're all in it together,'" the administrator told us. "She is always open to people taking ownership, and people leading, and people moving forward." For this principal, the DL project helped her to further act upon her inclinations for shared leadership.

Other principals reported that their views changed over time from the central leader to a facilitator of other leaders. Principals viewed their letting go of their more traditional perspectives on leadership as evolving over time. As one principal described, "In the beginning I felt the need to be more of a leader/facilitator. But then as we built capacity as a team and built trust, I found I was able to step back and the team took the ball and ran." Similarly, another principal noted "I find that I am delegating more and more, and sometimes at the end of the day I chuckle to myself and I'll say: 'two years, three years ago, you would have done that yourself.'"

Finally, even though they had volunteered to be part of the project, a few principals had trouble letting go of their authority. These principals did not reveal this directly, but it became clear when we talked to other leadership team members and they described the narrow scope of their principal-assigned responsibilities.

These stories of how principals viewed their roles in a distributed leadership framework suggest a rough continuum from a clearly delineated leadership hierarchy based upon position to shared leadership to situational leadership arising from the task at hand and who at the time was best qualified to take on and delegate responsibility. Principals and other leaders resided all along this spectrum and different manifestations of it were at play simultaneously in each school. While principals reported being at different places on the distributed leadership continuum, some of them described movement along it, others simply found voice for their philosophy and practices. Others were sympathetic in concept, but had trouble letting go in practice.

Strategies principals employed to build leadership capacity as well as exert their own leadership

As principals began to view themselves as one strand in the leadership tapestry of their school, they began to explore ways to build the leadership capacity of others, as well as to find alternative expressions for their own leadership. When principals were asked how they built the capacity of others to enact leadership as well as to exert their own influence in a distributed leadership context, their responses can be organized into three central approaches.

First, principals sought to set up opportunities for their faculty to meet and share ideas. Second, principals used a variety of techniques to empower faculty members to take on responsibility. Third, principals monitored the work of others to assure that things were being done, as well as to communicate their expectations. In these ways, principals helped to create an environment that encouraged leadership by others, while still binding people to a set of expectations for performance.

Organizing opportunities for the faculty to meet and share ideas. Principals facilitated leadership development through the creation of opportunities for faculty members to productively interact together. One principal, for example, explained that a key part of her role as principal was to "provide opportunities for teachers not only to meet, but to have meaningful conversations about the structures we build for students and how we provide them with learning experiences." Increasing communication amongst the faculty as a means of facilitating leadership as well as exerting their own influence was a central technique mentioned by many of the principals. "I spend a lot of time discussing different ideas with team members and teachers," said one elementary school principal.

Empowering faculty members. Principals described using a variety of techniques to encourage, support, and otherwise empower leadership activity amongst their faculty. One strategy was the sharing of decisions. One of the high school principals, for example, viewed her work as facilitating the sharing of decisions, while also retaining a voice in those decisions. "So I see my job primarily as to continue to talk in terms of shared decisions, as many decisions as I can share," she said. This comment indicates that this principal wanted collaborators in decision-making. But she also wanted to remain influential in the process, rather than fully handing off decisions.

Several of the principals viewed themselves as leaders of learning with trust as a key ingredient of building leadership capacity. One high school principal consistently referred to herself as the "facilitator of learning" in the building. Another principal saw empowerment in terms of supporting people to investigate their own needs and interests. The building of trust was another commonly mentioned way that principals sought to foster leadership capacity in their school and enact their own leadership. Principals viewed trust as an essential ingredient to building an environment conducive to shared decision making. Several principals felt that building trust amongst faculty members was one of their biggest challenges as a principal in a DL school, particularly in schools that had divisive histories and/or historically adversarial administrator-teacher relationships.

Monitoring activity. Even while principals encouraged others to take on leadership roles within their buildings, they were still keenly aware that they needed to make sure that things were being accomplished. Principals came to view monitoring as a companion to delegation. As one principal put it "if you delegate and there's not a system of checks and balances in place, that's when you could get burned. So you do have to delegate, but you do have to go back and make sure that what is expected to be done gets done." Several principals also talked about creating expectations as an important strategy for ensuring that others fulfilled the responsibilities that came with their leadership over certain tasks.

In sum, our investigation of the application of distributed leadership ideas and strategies into schools indicated that it had the effect of reallocating principal power and authority, as more members of the community were given legitimate authorization to enact leadership in some aspect of the organization's work. This resulted in a shift in the role of the principal, discouraging them from exerting overt authority and encouraging them to rethink their relationships with their faculty members.

The progress that the principals in the project made adjusting their roles depended on their personal inclination towards sharing leadership. All saw a change in their role in a distributed leadership framework, but some were more inclined to adapt their leadership, while others were slower to make adjustments because they conflicted with their individual conceptions of leadership. Even so, most adjusted their self perception to more of "a leader amongst leaders," viewing themselves as a guide of the decision-making process rather than the sole decider. In most cases, principals increasingly viewed themselves as developers of leadership, which gave them a new type of influence as they were shaping decision-makers rather than particular decisions.

Our investigation also suggests that the redistribution of leadership in an organization is not a zero sum game. The sharing of leadership across a broader set of formal leaders in a school does not necessarily mean that the principal loses influence and authority. Instead of looking at leadership as a finite quantity that is redistributed from the principal to other leaders, it is more appropriate to think of it as an underutilized resource that lies fallow in a school until it is cultivated through either individual initiative or programmatic design.

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Although it may seem paradoxical, our fieldwork suggests that principals are potentially exerting more influence by building leadership capacity in their schools than by directly being involved in most decisions. There are so many decisions being made every day in complex organizations like schools, that it is unlikely that principals who seek to play a direct role in most of them are able to do so. But by fostering the leadership of others, and shaping that leadership by providing opportunities for other leaders and faculty members to meet and share ideas, empowering other leaders to take on leadership roles themselves, and monitoring and setting expectations, principals can do more than directly influence decisions in which they are aware and play a part.

Team Member Strategies to Enact Instructional Leadership in their Schools

Three central approaches to carrying out leadership emerged from interviews with the DL team members. First, team members described taking a leadership role in sub-teams within the school. Second, they described working with individual teachers on instructional issues. Third, increasingly aware of the concept that leadership arises in particular situations, team members reported encouraging other faculty members to take on leadership of particular tasks.

One of the most common approaches for influencing teachers was for leadership team members to work with grade level, subject matter, or issue-specific teams in their schools. Typically, this occurred as leadership team members enacted their action plans. In some cases, leadership teams organized sub-teams according to action plan emphases. In one elementary school, for example, teachers were involved in a data team, a mathematics team, an attendance team, and a critical friends team. As the principal of the school described the work of the attendance team,

> The person who did attendance last year as her personal action plan worked with another teacher who's not on Distributed Leadership this year. And between the two of them, they had a little subcommittee. They've done a great job on attendance. We were averaging around 92-93%, which is a huge jump for us. We just barely made 90% last year. Any time you get a 2-3% bump in student attendance, that's pretty significant. So that's been very effective.

In other schools, teachers led grade-group teams that were closest to their grade levels. So an early grade teacher on the leadership team led the school's K-2 team, a 5th-grade teacher led the school's 3-5 team, and a middle school teacher led the schools 6-8 team. In a middle or high school, the leadership team member might have led an English or mathematics teacher team.

A second way that leadership team members described enacting their leadership was to work with individual teachers in the school on classroom issues. As one 5th-grade teacher and leadership team member described her efforts: "I see as my role as to help other teachers become better teachers, to collaborate with everyone to do whatever it is that we need to do to make sure the children are getting the best that we can provide them."

A high school teacher on the DL team described how working with the DL project helped her to change her way of working with colleagues. "Since I've been with the DL team it's changing my way of thinking and how to interact with my colleagues. I've been able to work collaboratively with my colleagues and address them in a meaningful way to help them move forward and give them the support that they need with what they need to do in the classroom."

A middle school teacher described how her peer status helped her to relate to the issues that other teachers were going through and gave her legitimacy to assist them, "I tell them, 'I'm still in the classroom just like you are. I understand everything because I'm going through the same thing.' So with me being a leader and a classroom teacher. . . I'm not talking the talk, I'm walking the walk. So when I'm talking to you, I'm like, 'Oh, I had the same incident happen to me the other day with such-and-such and here is how I worked it'… So I'm able to be influential in that way."

The third way that leadership team members enacted leadership was to encourage teachers in their schools to take on leadership responsibility in particular situations. This approach was very much in line with the conception of distributed leadership emphasized in their professional development, in which leaders emerge in particular situations to play a leadership role. For example, an elementary school teacher leader explained, "in this building most of the

teachers step up and do what needs to be done. I mean, everybody at some point or another probably has led a professional development or something in this building." Similarly, a high school mathematics teacher on the leadership team said, "I feel certain teachers are stepping up that usually don't step up and are making their voices heard. So I see other teachers wanting to take leadership roles." But in this case, the fostering of task-based leadership was being encouraged through thoughtful design principle, rather than occurring spontaneously. As one 3rd-grade leadership team member described,

> There is a time and a place for everyone to step into that spotlight of being a leader. Distributed leadership, as a distributed leadership member, we might be seen as the forefront, but we have the staff behind us that shine in many different arenas. Myself, I feel like a facilitator of trying to pull those people forward to share their strengths within the school.

The Role of Teacher Leaders in Distributed Leadership Schools

Describing the strategic role of teacher leaders conveys the different avenues by which they sought to work with and encourage other teachers, but does not adequately capture their thinking and experiences as they sought to become teacher leaders in their schools. Nor does it provide insight into the ways in which they viewed their efforts to influence their peers. In this section we describe how teachers on the leadership team conceived of their leadership and its relationship to their teaching.

One of the persistent messages teacher leaders conveyed in interviews was how they prioritized their teaching responsibilities and the learning of their students. They impressed upon us that their teaching commitments came before their leadership responsibilities. This reflected both their commitment to teaching and the fact that their perspectives on their leadership were rooted in their identity as classroom teachers. They viewed themselves first and foremost as classroom teachers who also had leadership responsibilities. Virtually all their descriptions of their leadership roles flowed from their work as classroom teachers. For example, as one 3rd-grade teacher described her role, "my picture of a teacher leader is someone who wants to improve their own knowledge for the children and, in turn, better the knowledge of other teachers in instruction to help them succeed." In this way teachers on the leadership team saw their practice as the source of their leadership of others. By expanding their own practice, they deepened their leadership capacity because they had more to offer others.

Teachers on the leadership team also expressed how their vantage point as classroom teachers provided a distinct perspective on school challenges because they were able to access different information than administrators about the issues facing their school. One elementary school literacy support teacher expressed this view when she commented, "I guess my role would be a voice from a classroom teacher point of view. Sometimes I see things and hear things and am told things that maybe other people aren't necessarily aware of, because I'm in the classrooms." This teacher understood the distinct perspective that classroom teachers have on school issues, and viewed her leadership role as representing that view.

Teachers on the leadership team also expressed how their vantage point as classroom teachers provided a distinct perspective on school challenges because they were able to access different information than administrators about the issues facing their school.

Even as they remained rooted in their roles as teachers, participating in DL put the teacher leaders in a different position relative to their peers. While they held a status that was not administrative, they were also taking on responsibilities that were beyond those of most teachers in the school. Teachers on the leadership team reported that they were perceived differently by their peers. They felt that they were seen as leaders who were more approachable and accessible to their colleagues than the school's formal leaders. As one 3rd-grade teacher leader said,

> I think it puts us at the forefront. A lot of time teachers tend to stand in the shadow of the principal. And I think in a DL school it kind of puts you more along the same line. And people see you as someone they can go to with a problem or something they believe should be dealt with through DL. And they feel as though they have other people to go to besides the principal.

Thus teacher leaders occupied a place in which they continued to have the legitimacy of classroom teachers, but also some aspects of the influence of leaders.

Even though DL team participation conferred a different status on teachers, teacher leaders were careful to draw the line between their leadership activities and any overt exertion of authority or to tell a teacher what to do. In a number of cases, teacher leaders talked about the limits of their role. "As far as me going and telling another teacher that she's not doing what she's supposed to be doing, that's not my job. That's the principal's job or the vice principal's job. I believe strongly about that," explained one teacher.

With the objective of changing instruction in their school, but constrained in their authority to impose change upon their peers, teacher leaders reported using a number of "soft" strategies to influence the instructional practice of their colleagues. When describing their work, a number of common themes arose about how teacher leaders went about leading in their schools. These included (a) leading by example, (b) collaborating with peers, (c) encouraging peers, and (d) making themselves available as a resource to other teachers. These approaches provided opportunities for other teachers to be influenced, but did not intrude on the practices of teachers that did not interact with the teacher leaders. They are quite distinct from authority-based leadership strategies, which are dictated from above and are imposed to compel teachers to do something different. Teacher leaders explicitly rejected the authoritative strategies of administrators in favor of a variety of softer influence approaches.

Leading by example

One approach that teacher leaders used to influence their peers was to lead by example. When we asked teacher leaders about their leadership roles in their schools, they most often described their primary responsibility as teachers, and connected this to leadership by example. As one teacher said,

> Well, I think my first and foremost responsibility is doing what's best for my students. And I think that's the main thing and I think using the strategies that have been recommended using, everything to get the students ready for all of these tests that they have to take, I think that's primarily the key role. You know, leading by example, and getting others on board to do the same thing.

Similarly, another teacher leader explained that she enacted her leadership through example, "My style is more [that] I like working with the kids and being a teacher. The responsibility of leader, I'm not—I mean, I lead by example more so than telling people what to do." In both these examples, the teacher leader had a very contained view of their leadership responsibility. They felt they could influence other teachers by exemplifying good practices and then sharing them with their peers in a demonstrative way.

Collaborating with peers

A second soft strategy that teachers used to influence the practices of their peers was through collaboration. Teacher leaders sought out other teachers who were willing to work with them and built collaborative relationships around instructional improvement. According to one 3rd-grade teacher leader, "I asked myself, 'Who can I work with to say that if we collaborate as teachers, our instruction will improve, which will improve our children?" She then targeted two teachers in adjacent grades that she had been friendly with and began conversations about teaching reading with them. She shared teaching materials and ideas about engaging the kids with them, and offered as much support as she could. "I see as my role as helping other teachers become better teachers, to collaborate with everyone. To do whatever it is that we need to do to make sure the children are getting the best that we can provide them," she said.

Encouraging peers

Some teacher leaders were less comfortable with the strategic roles that the project encouraged for teacher leaders and were more attracted to providing encouragement to their fellow teachers. This seemed in part a reflection of their personalities and partly their analysis that this is a level of support for teachers that is missing from their current school. One 1st-grade teacher, for example, described her leadership as a preference for encouraging peers over some of the formal activities of teacher leaders, like professional development or developing a professional learning community:

> Me personally, I enjoy—empowering people. And I enjoy working together. I enjoy allowing people to know . . . all the good I see. . . . So I think my role is more the subtle—telling people 'Great job! Why don't you get involved? Glad to have you.

Acting as a resource for peers

Finally, a few teacher leaders talked about their leadership in terms of providing resources for other teachers. Either they referred to themselves as a resource or they talked of their role as one of getting resources for teachers through their access to administration and membership on the leadership team. One elementary school teacher leader saw herself as a resource for other teachers:

> Me personally, I enjoy—empowering people. And I enjoy working together. I see my role is to help people manage their classrooms. To help people find strategies and find their strengths and be able to be a resource for them, or to direct them to someone else who can be a resource for them in the building or outside of the building.

Other teacher leaders talked about helping teachers get materials or supplies by bringing up these requests at leadership team meetings. Consistent with the theme of the section, teacher leaders viewed this as advocating for other teachers.

Summary of Findings about Distributed Leadership Teams as Catalysts for Change

- Principals in DL schools tended to shift from being the central decision-maker of the organization to a leading contributor. Rather than reducing principals' influence, this allowed them to exert their sway in a broader range of ways by organizing, empowering, and monitoring the leadership activities of others. This altered, and in many cases expanded, their sphere of influence in their school.
- Teachers who took on leadership responsibilities in schools faced a difficult challenge. In some ways, their status as teachers provided them with legitimacy with their peers that administrators did not have. On the other hand, teachers lacked authority to compel other teachers to participate in reform efforts or to change their practices. This is the puzzle of leading from the middle in schools; teachers have a special insider relationship with their peers, but they lack the authority to push for change or hold teachers accountable for their practice.
- Teacher leaders used a range of strategies to provide instructional leadership change in their schools. These included providing professional development, leading grade-level or subject-matter teams, working individually with peers and/or acting as a resource for them, and encouraging other teachers to take on leadership roles in particular situations.

3. Leading School-Wide Change

As discussed in the prior section, DL team members adopted multiple formal and informal strategies to advocate for instructional change. To focus and reinforce these efforts, the project leaders instituted an action planning process in the second year of their work. Team members were provided with initial training on the action planning process, including goal articulation, creating action plan steps, timelines, and responsible members for each step. Coaches were trained to facilitate and monitor progress and troubleshoot barriers with team members. In addition to helping the teams to be more organized, an additional purpose of action planning was to focus team members' work more specifically on instructional issues. In these ways, action planning became a central strategic vehicle to bring about school-wide instructional change. Initially, the project sought to align its action planning process with the district's process of setting school-wide, measurable goals. In 2009, perhaps influenced by the project's work, the Philadelphia School District adopted a process that looked very similar to the DL Action Planning process.

In this section, we examine the focus and effects of the Action Planning process. First, we provide an overview of the Action Plan choices of the first two cohorts of DL schools. Next, we present case studies of the action planning processes of the four Cohort 1 schools—Stevens Elementary, Marshall Elementary, Jay Elementary, and Chase Elementary—and review evidence of their school-wide impact. Overall, the data suggest that action plans were diverse but instructionally focused. Further, the evidence suggests that they were effective in helping DL teams reach to push specific interventions out to classrooms in their schools. Additionally, there was some evidence that action plans enabled DL teams to make greater progress on specific instructional issues than comparison schools. It should be noted, however, that all measures of instructional impact that are included in this analysis come from self-reported surveys, and therefore must be interpreted with caution.

Overview of Action Plan Topics

The action planning process was instituted by the project leaders to help the DL teams to set clear, measurable, and instructionally related goals. Each team member was to develop an individual action plan that they would own for the school year. The action plan specified each team member's instructional improvement target, specific actions to be undertaken to reach that target, timeline for completion, responsibility for carrying out each action, and metrics or evidence for gauging impact. The project leadership felt strongly that each action plan should emanate from the team members' analysis of the needs of their school and that each team member should have an individual plan of which they could take ownership.

In 2008, the evaluation team conducted an analysis of the action plans of the first two cohorts of DL schools. The results are shown in Table 2. Overall, the leadership team members of the 8 schools had 30 action plans. In one school, the team decided to have one unified action plan, focused on developing PLCs to improve reading instruction. Two team members focused on test preparation, while three focused on improving mathematics instruction. Team member mathematics instructional focus included a high school team member who developed and implemented a school-wide algebra supplemental curriculum, and an elementary school team

member that focused her efforts on improving student number fact skills and problem-solving skills. Four team members focused on improving literacy generally through such strategies as teacher visitations focused on literacy and the implementation of a literacy block in grades across the elementary school. Four other team members focused on examining data in the school. Five team members across the eight schools focused on improving writing skills, by such things as training teachers on strategies for improving writing, incorporating writing practice into the regular schedule, and developing writing workshop protocols. Most common were what we call general instructional improvement strategies, which included such efforts as peer visitations, book clubs, study groups, informal classroom walk-throughs, and developing small learning communities around instructional topics.

Table 5. Analysis of Action Plans in 2008 of the first 2 cohorts of Distributed Leadership Schools (N=30)

Number (PCT)	Action Plan Focus
1 (3%)	Unified leadership team action plan to develop professional learning communities to improve reading instruction
2 (6%)	Test preparation
3 (10%)	Improving mathematics instruction
4 (13%)	Examining data (e.g., conducting school-wide data analyses; reviewing reading level data; reviewing data on all interventions in place in the school)
5 (17%)	Focusing on improving writing skills (e.g., training on strategies for improving writing; writing practice and celebration; developing writing workshop protocols)
11 (37%)	Improving instruction generally (e.g., looking at student work, peer visitations, book clubs, study groups, developing small learning communities, informal walk-throughs).

Overall, our analysis of the action plans indicated that team members' activities were very diverse, which indicated that school leaders had lots of different views on what their schools needed and how to bring about instructional improvement. There was no dominant activity or emphasis. Interestingly, there was more attention paid to writing than to the tested areas of reading and mathematics. Some of the action plans were more targeted than others, and general improvement strategies were the dominant emphasis.

Case Studies of the Action Planning Process

During the 2008-09 school year, the CPRE research team conducted four case studies in the first cohort of DL elementary schools. Data collected for the case studies included interviews with DL team members and teachers in each school, observations of grade group/PLC meetings, and a brief survey of the faculty in each school. The purpose of this data collection was to understand what strategies the DL teams were using to improve instruction in their schools and how effective the DL teams were in reaching their faculties.

Table 6. Action Plan Strategies in Four Case Study Schools

	Stevens Elementary	Marshall Elementary	Jay Elementary	Chase Elementary
Instructional intervention	Improving vocabulary	Literacy across the curriculum	Looking at student work (LASW)	Focus calendar
Rationale/ data sources	Review of state and interim assessment data suggested vocabulary was pulling down student performance in other domains.	Survey of faculty focused on school-wide instructional priorities; state test data showed reading difficulties might be hurting overall test performance.	Team wanted to strengthen professional community in the school, spread best practices across classrooms.	Teachers in the school were being asked to do too many different things at once; needed an organizing framework.
Strategy	Contracted professional development for whole faculty through Penn Literacy Network; DL team members provided follow up training on data use.	Contracted professional development for whole faculty through Penn Literacy Network; DL team members provided follow up support.	DL team members modeled LASW protocol in grade-group meetings, followed by biweekly LASW meetings with rotating presenters.	Create calendar detailing what to focus on each week; how to look for evidence of that strategy in student work. Administrators conducted walk-throughs and lesson plan reviews to monitor implementation.

The case studies indicated that each of the four school leadership teams (a) had chosen a distinctive approach that fit their school context and needs, (b) had developed a well-thought out implementation strategy, (c) had implemented the approach deeply in the school, and (d) that teachers across the school received and implemented the approach. Table 6 summarizes the instructional intervention, rationale, and strategy in the four case study schools.

Stevens Elementary School's Efforts to Expand Student Vocabulary.

Leadership Team members at Stevens Elementary School chose to focus on vocabulary as a precondition of literacy across academic domains. The team based their decision on an examination of student performance trends, where they noticed the effects of weak student vocabulary not just in reading, but across subjects. In response, the team implemented professional development and support related to vocabulary instruction, including presentations from outside experts, modeling instructional strategies by both outside experts and DL team members, observations and walk-throughs conducted by both DL team members and district staff, and individual coaching from the school's teacher leader. By the end of the school year, team members reported that there was a good deal of excitement and conversation around vocabulary and reading generally, and that they felt there was a high degree of consensus about the importance of each.

Data from focus groups, interviews and surveys with the school's faculty all show that Stevens' teachers strongly believed that their work on vocabulary had a positive impact on student learning. One member described the learning implications of the school's "culture of vocabulary":

> [Students] are curious now. You should hear them. Each day we walk by each other, "Look, the word for today is 'repercussion.' The word of today is 'cognizant.'" And the kids are eating it up. There's an excitement. And now their vocabulary must be so enriched. And I absolutely credit that to this [the school-wide emphasis on vocabulary]. Because it's all we've been talking about with each other.

Marshall Elementary School's Literacy Across the Curriculum.

The Marshall DL team identified and supported a school-wide focus on reading and writing (literacy) across the curriculum. The DL team identified the literacy across the curriculum focus, drawing from PSSA data, work conducted in team meetings and thorough information drawn from "coffee and conversations" with the whole staff.

The Leadership team utilized training on reading comprehension and writing instruction from DL trainers. The DL team members also conducted turn-around training for the whole school and for grade groups on topics including constructed response and specific strategies for addressing questions posed in literacy across the curriculum. Finally, the DL team worked with teachers across the school to identify necessary resources (books, activities, etc.) which were purchased through Annenberg grant funding and located in individual classrooms as well as in the library.

In interviews, teachers discussed the professional development organized by the DL team and described work done in grade groups and/or with subject-specific teacher partners. Teachers at Marshall were generally pleased with the training and support offered around literacy across the curriculum, reporting both improved preparation to teach and knowledge of who to go to with questions or suggestions. Teachers spoke positively of the professional development and often cited specific examples of strategies currently being used in their classrooms. For example, one teacher explained "we definitely do a good 2 ½ hours of just reading and writing every day, especially first grade I feel like that's my main focus, I mean they can't really do anything else if they can't read."

Jay Elementary School's Focus on Looking at Student Work.

In our third case study, we learned that the Jay Elementary School's leadership team wanted to strengthen professional community in the school and spread instructional practices, and therefore decided to engage the entire faculty in looking at student work. This approach was aligned with the professional development the leadership team received from PCEL. The school, organized in PLCs of Grades K-2, 3-5, and 6-8, used PLC meetings every other week to implement their examination of student work. They built upon routines they had learned in their professional development to set up an agenda for the meeting, with particular roles for participants. Interviews with DL team members and school faculty members indicated that the initiative was a positive and instructionally influential experience. "Everyone raves about how

the looking at student work meetings are going," commented one DL team member. "The teachers really honestly, they're excited," commented another. "They love to share." Most teachers spoke in approving terms about the process, offering that it was helpful to see what colleagues were doing, and to get tips on modifications they might make to their own classes.

Chase Elementary School's Focus Calendar.

Chase school leaders felt that there was too much going on in the building and focusing the work of teachers was an important thing to do. According to one of the leadership team members, "The whole idea behind the Focus Calendar was to keep everyone on the same page. Last year we were in AYP jail and we had a lot of things thrown at us. The biggest complaint from teachers was they never knew what strategies to work on, that they never knew what was going on, and that there was so much going on. So the whole idea was to keep everyone focused and on the same page."

The Focus Calendars were distributed to teachers in advance each month. They included strategies for emphasis each week, the schedules for grade-group meetings, the focus of grade-group meetings, the schedules for other school meetings, dates for sessions on test preparation for students, school-wide sessions on building vocabulary for state tests, and other pertinent dates for the school.

The strategies contained in the Focus Calendar were a combination of test preparation strategies and more general learning strategies; and form the heart of the calendar. The leadership team developed a set of routines to make sure these strategies were implemented and became a vehicle for other aspects of instructional focus. The strategies were supposed to be present in teachers' lesson plans. They were expected to be visible in classrooms, along with examples of student work; administrators looked for them when conducting walk-throughs. When teachers in grade-group meetings examined student work, they were expected to look for evidence of the strategies in the student work samples. Some teachers had laminated small versions of the different strategies on cards that students kept on their desks to use when they were working on problems.

In interviews, teachers were uniformly supportive of the Focus Calendar in general, and the organization and support of the strategies, in particular. "People find the Focus Calendar very useful. . . .We've been taught and re-taught and re-taught how to apply these strategies and I know from my classes that I see the benefit," explained a 7th-and 8th-grade mathematics teacher. A 3rd-grade teacher said:

> . . . you know if you have gone through the calendar and done everything they have asked you to do then you have covered everything you are supposed to cover. So it's like a system of checks and balances to make sure you have covered everything you are supposed to cover.

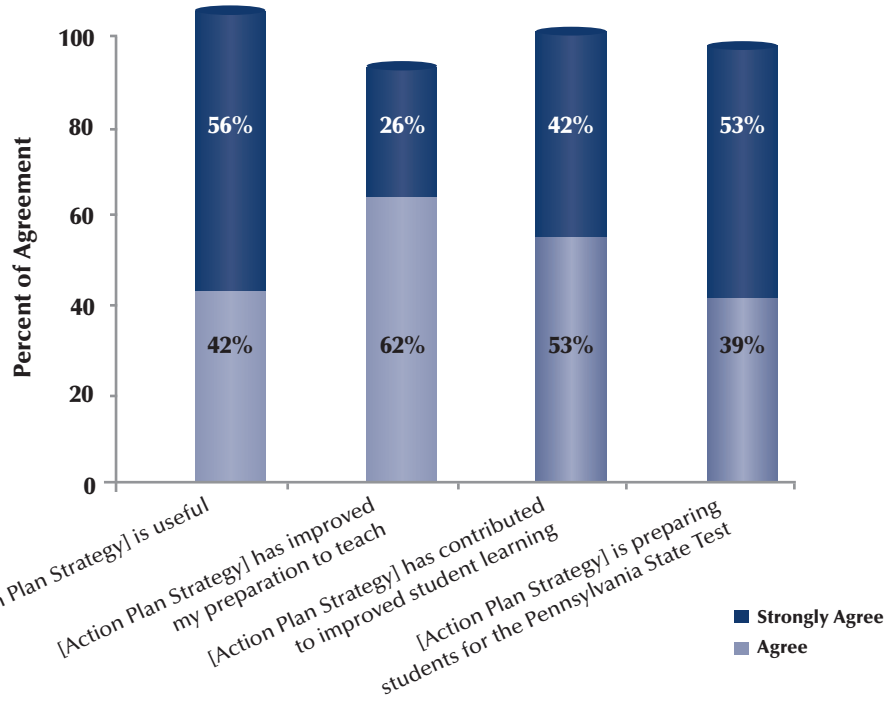
Looking across the four cases, interesting tensions emerge in the ways the DL teams approached implementation. At Marshall, faculty input was the primary driver of team priorities, and data was introduced as a strategy for working on those priorities. By contrast, at Stevens priorities were identified from the data, and faculty input was part of the implementation (consensus building) strategy. A comparison of Jay and Chase also reveals interesting differences in implementation strategy. While both schools essentially identified priorities at the DL team level, Jay opted for a strategy in which DL team members modeled desired behaviors but left it to teachers to adopt them, while Chase was the only school to explicitly invoke administrator authority in monitoring the implementation of the intervention.

School Faculty Perceptions of the Action Planning Process

In the spring of 2008, as part of the action plan case studies the evaluation team conducted a brief survey of all teachers in the first cohort of DL schools. Before conducting the survey, we queried each school's leadership team to identify the top two action plan emphases of their team members. The survey of faculty members then focused on these emphases and asked faculty members about the priority, utility, and influence of each action plan emphasis.

As reported on the surveys, the teachers in the Cohort 1 DL schools found the action plan strategies to be influential on their teaching, the learning of their students, and their preparation for the Pennsylvania state test, the Pennsylvania System of School Assessment (PSSA). Figure 6 shows a summary of survey results from eight DL schools about the influence of action plan activity on teachers and students. Because each leadership team had different action plans, the questions focused on the particular emphasis of each leadership team. Overall, 98 percent of teachers agreed or strongly agreed that the action plan strategy was useful. Eighty-eight percent agreed or strongly agreed that the action plan strategies improved teachers' preparation to teach. Fully 95 percent agreed or strongly agreed that the action plan strategy contributed to improved student learning. Finally, over half of the teachers surveyed strongly agreed (53%), and an additional 39% agreed, that the action plan strategy was helping to prepare students for the PSSA.

Figure 6. Distributed Leadership School Teachers' Responses to Survey about Utility of Leadership Team Action Plans (n= 81)



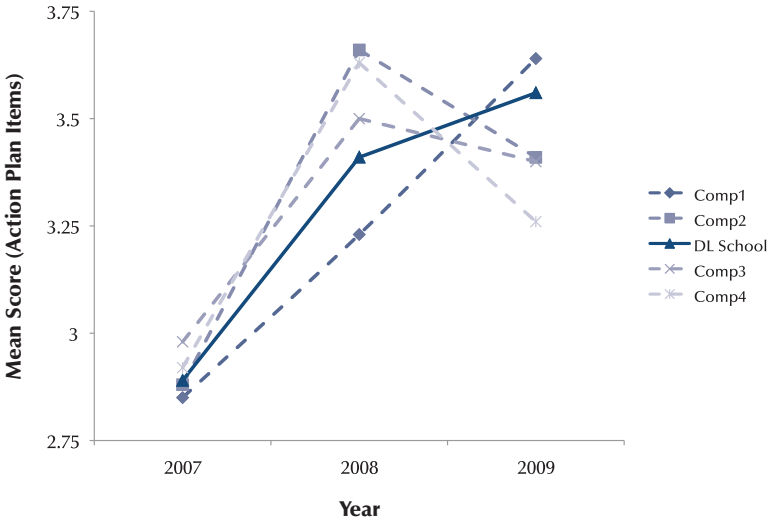
Impacts of Action Plans

While the case studies and school faculty survey data provide important evidence of the impacts of the action plans on the DL schools, the evaluation also sought comparative evidence of their impacts relative to other, similar schools. The challenge was that because each DL school had a different set of priorities for instructional improvement, we could not use the full set of control schools as a fair comparison. Further, we needed measures that fairly compared the action plan emphases of the DL schools to those of appropriate comparison schools. To develop a fair evaluation of the action plans' influence on school faculties in the 2008-09 school year, we devised a five-step strategy. First, we asked leadership team members to identify the two action plans that were most closely aligned with the school's instructional improvement goals. This allowed us to use individual team member action plans as a proxy for school-wide instructional priorities.

Second, we combed our annual survey for items that aligned with that effort. Third, we combined those items into a construct representing the action plan effort. Thus, for example, a construct for Differentiated Instruction was made up of six items about such things as flexibly grouping students, conferencing with students, and re-teaching students who had not mastered a skill or concept. Fourth, we identified comparison schools that had a similar rating on this scale in 2007 and a similar trajectory from 2007 to 2008. The purpose here was to find schools that had both similar baselines and similar growth patterns in the year prior to the implementation of this action plan strategy. This was important because we wanted as fair comparisons as possible in terms of both status and growth prior to intervention. Finally, we compared the slope of change from 2008 to 2009 in both the DL and comparison schools using analysis of covariance.

Applying the above technique, we conducted 12 analyses from the first two cohorts of DL schools (while we requested the top two strategies from all eight schools, one school had a school-wide strategy, while in three other cases we had no matching survey items to use). Overall, the pattern of results showed general differences in progress in DL schools compared to matched comparison schools on the action plan emphases. While there were some examples of statistically significant progress (relative to the matched comparison schools), the results were more likely to show favorable positive trends.

Figure 7. Changes in Teacher Work on Differentiated Instruction



Two examples of these patterns of DL school progress in comparison to matched schools can be seen in Figures 7 and 8. Figure 7 shows the DL school (the bold diamond in the figure) in comparison to four other appropriate comparison schools on the six item construct measuring Differentiated Instruction. We can see that all the schools had approximately the same starting point in 2007 and similar slopes from 2007 to 2008. From 2008 to 2009, the period of our investigation, the DL school continued to grow in teacher reports of use of differentiated instruction, while teachers in three of the four comparison schools reported decreasing use from 2008 to 2009. However, the differences between the DL schools and comparison schools were not statistically significant.

Figure 8. Changes in Teacher Work on Inclusion

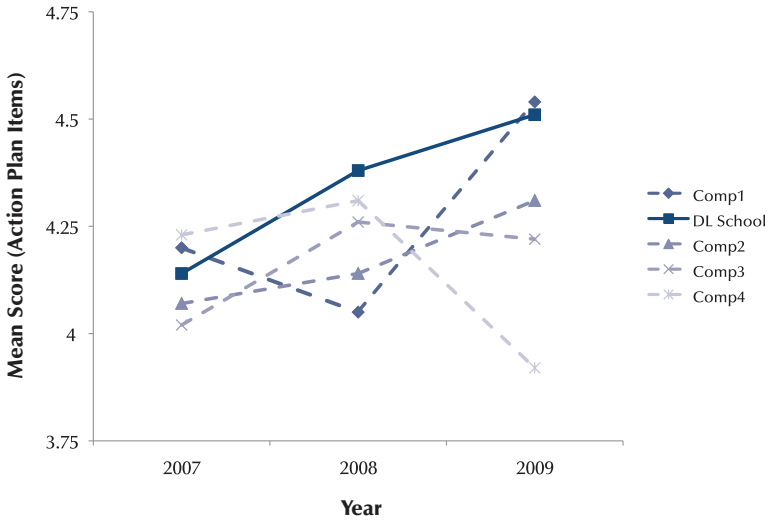


Figure 8 shows results of a comparison of school-wide inclusion between a DL school that had this as their action plan strategy and a set of carefully matched comparison schools. The schools all started out in similar places in 2007 in terms of teacher responses on the 4-item construct measuring school-wide inclusion. The growth from 2007 to 2008 was similar for most schools. From 2008 to 2009, the period of interest, the teachers in the DL school (represented by the large black diamond), increased their reports of the frequency of use of school-wide inclusion, while other schools had lesser growth patterns. While differences between the top schools in 2009 were not statistically significant, the DL school analyzed here was voted the 2009 Special Education School of the Year in the School District of Philadelphia for their work on school-wide inclusion.

School-Wide Student Impacts

Throughout the project we annually monitored student performance in reading and mathematics in both the DL schools and the comparison schools. While there were fluctuations in performance, and overall achievement generally increased in the DL schools over the course of their participation in the project, there were no statistically significant differences in student achievement between DL schools and the comparison schools. This is not entirely surprising for three reasons. First, many of the DL action plans were not focused on reading and mathematics—the two subject areas that are tested. Second, even those that were focused on the state test subjects were frequently targeted to particular grade levels and therefore less likely to impact student achievement school-wide. Given this variability, which was in-line with the ambition of the project designers to encourage the DL team members to decide how best to support instructional improvement based upon their own assessments of their school needs, other indicators are better measures of the impacts of the project. It should be noted that the DL project was implemented during a period of rapid leadership turnover and competing (and sometimes contradictory) reform initiatives within the School District of Philadelphia. The resulting instability made it particularly challenging to sustain school-level reforms of any kind. Further, the general trend toward more mandated and scripted reform during this period was in many ways in conflict with a distributed perspective on leadership. So while all schools (treatment and control alike) had to deal with leadership turnover and instability, schools implementing DL likely had to swim upstream to a much greater extent than was originally planned.

Summary of Findings for Leading School-Wide Change

- Individual team member action plans were a focal point of project emphasis, intended to help team members set clear, measurable, and instructionally related goals for team members' work each year.
- Analysis of team member action plans indicated that these activities were very diverse, with no dominant activity or emphasis. Some of the action plans were more targeted than others; with general instructional improvement strategies the dominant emphasis. Action plans tended to focus more on writing than on the state-tested areas of reading and mathematics.
- Despite the array of action plan strategies, case studies from the early years of the project suggest that all teams were effective in pushing instructional interventions to the classroom level. Additionally, surveys of school faculties about the action plans of their leadership team members indicated that they felt the action plan strategies were useful, improved their preparation to teach, and contributed to student learning.

- Because action plan foci varied by leadership team member, detecting impacts of the action plans was methodologically challenging for the evaluation team. Using a sophisticated technique of matching DL schools and comparison schools on their action plan topic emphasis before the action plan work began, we found some evidence of impact of action plans on teacher survey measures.
- There were no detectable effects on school-wide student outcomes. This was likely due to a combination of factors, including the indirect relationship between leadership and student outcomes and the varied focus of individual team members' action plans that were often not directed at tested subjects.

V. Implications

Both the successes and challenges faced by the DL project offer lessons for future reform or leadership development efforts.

First, the DL project suggests that if properly trained and supported, teachers can serve as agents of instructional change in their schools. Their expertise and ongoing presence in the classroom confers legitimacy with colleagues that few administrators enjoy, and this expertise can be augmented and complemented by leadership training. Further, the case studies (and to some extent the survey data) show that teachers can be effective at both spreading and supporting reform priorities in their schools. Together, these findings suggest that cultivating DL can be a powerful tool for growing the overall leadership capacity of schools, both in terms of the number of people who have the opportunity and ability to influence practice and their ability to collaborate. Particularly in urban school environments where turnover at every level is the norm, "deepening the bench" of people who can carry out this work is critical to sustaining reform efforts.

While our findings highlight the critical role of teachers in leading instructional change, a consideration for future research and reform concerns the depth at which these leaders are able to work to change instruction. Interviews and focus groups with DL team members suggest that changing teaching is intensive, relational work. It is therefore reasonable to wonder how many teachers a given teacher-leader could work with effectively, and what level of effort would be required to meaningfully change instruction throughout a school.

Another important theme is that the school principal remains a central figure, even in a school with a well functioning DL team. The principals of the DL schools played a central role in their school's ability to make progress by constraining or enabling the leadership team and individual members to take on responsibility and act with greater autonomy. In DL schools where the principal had trouble letting go of control over decision-making, leadership team members tended to maintain these well trodden patterns and progress was slower because they were always checking with their principal to confirm their judgments. In schools where the principal trusted and enabled team members to take on decision-making responsibility and carry out decisions agreed upon by the DL team, there was not only a greater sense of team vitality, but the teams seemed to make deeper progress in enacting reforms and established better working relationships.

A further implication from this evaluation is the lessons we learn about different ways to get to instructional change in schools. The different action plan approaches taken by leadership team members provide a nice natural experiment on different strategies to make meaningful instructional changes in classrooms. Some team members calculated that cultural changes in schools were necessary precursors to making instructional changes. While these judgments may have been reasonable, they ran the risk of delaying more direct instructional interventions for the foreseeable future. For it is quite possible that cultural issues run so deep that team members might never get beyond them to tackle more directly instructional reforms. Where a school starts is important, and it may be more effective to change culture through directly addressing instructional issues than by viewing them as sequential.

Additionally, it is important to acknowledge that leadership improvement initiatives, although essential to any successful change effort, should be complemented by a strong, coherent, and supported curriculum and professional development model. The DL project was intended to complement the School District of Philadelphia's curricular and instructional system. When rapid leadership turnover undermined that system, schools were left to chart their own course with minimal guidance or support. The professional development and resources provided by the project helped them weather this period of uncertainty and instability, but it is also clear that instructional improvement efforts were also weakened by the absence of a clear, well supported instructional model.

Finally, it is also important to note that all leadership work happens in a wider organizational or institutional context. Just as it would be difficult for teacher leaders to succeed under a principal who did not value their leadership, it is difficult for principals to support DL in their schools when they themselves are subject to a command-and-control leadership style within the district. Changes in the School District of Philadelphia over the life of project significantly shifted expectations and accountability for school principals in the direction of compliance with system-wide initiatives. For example, principals lost much of their discretion over how to use professional development time, what electives could be offered in their schools, and when specific content should be taught. These changes placed them under enormous pressure to pass district mandates on to their teachers—an approach that is antithetical to distributed leadership.

In addition, neither the program nor our model considered the value of more explicitly concerted integration of the efforts and actions of team members. Our analysis of principal and teacher roles suggests that more alignment of strategies and action plans across leaders would take advantage of the strengths and constraints of leaders in different positions within the school ecology, allowing them to complement each other to reach unified goals.

VI. Conclusion

Mapping our findings onto our initial theory of action shows both the strengths and challenges of the Distributed Leadership project in the School District of Philadelphia. Summing up our evaluation findings indicates that the project was highly effective in recruiting and training DL teams. Our network analysis showed that the faculty members who were selected to staff the leadership teams were instructionally respected members of their schools. This is important because it provides evidence that the project attracted individuals in the school that had instructional expertise and were respected by their peers.

Second, the teams coalesced together into functioning leadership teams that focused on instructional improvement. This finding is supported by a number of data sources. Our interviews with team members, examination of video of team meetings, and analysis of survey data all support our conclusion that the teams functioned effectively. While some teams went through adjustment issues, they reported that the DL training and coaching were instrumental in shaping both what they focused on and how they worked. Team members reported using both the hard skills (e.g., developing a vision, setting up and running functional leadership team meetings, more deeply understanding change management, and increased knowledge of content and leadership of content), and soft skills (emotional intelligence, teamwork, and conflict resolution) in their leadership efforts. Further, the distribution of leadership amongst the range of members of the teams, both formal and informal school leaders, was evident in our video analyses of leadership team meetings, in which both principals and teachers participated and teachers assumed leadership roles more than half (57%) of the time. Additionally, the video analyses revealed that teachers assumed leadership with increasing frequency when instructional change was the focus on the discussion in leadership team meetings. Most powerfully, the survey analysis comparing the functioning of leadership teams in the DL schools in comparison to the functioning of leadership teams in the comparison schools showed that by the last year of the project, the DL teams were significantly higher functioning than the leadership teams in the comparison schools. The experimental design of the evaluation allows us to conclude that the training and support of the DL project caused the DL teams to function more effectively.

Third, our data indicate that team members effectively engaged with school faculty members via a number of means. These included (a) working with subgroups of teachers in the school (either grade groups, content teachers, etc.); (b) working directly with individual teachers, or (c) encouraging teachers to take on leadership themselves. Our evaluation efforts in this area concentrated on leadership team member action plans, which were the most visible manifestations of their efforts to work with teachers on instructional improvement. Our analyses of action plans found them to be diverse and variable in potential, but all focused on some dimension of instructional improvement. Our case studies of the action plans in four DL schools indicated that this sample of Action Plans were well conceived, implemented broadly by teachers, and positively received by teachers as likely to influence student learning. Together, these findings suggest that the proximal outcomes indicated in the theory of change—that is, those outcomes that are most directly related to those participating in the intervention—were largely realized.

There was also some evidence of impact beyond the DL teams. Our analysis of both survey and interview data about the action plan process suggested that DL teams were successful in engaging and influencing the wider faculty in their buildings. Teachers were highly aware of topics or initiatives that the DL team had prioritized, and a comparison of DL and non-DL schools with similar instructional priorities suggested that the DL schools were making more progress in changing teacher practice.

Our findings of impact on school practices were tempered by our inability to detect differences in reading or mathematics student performance between the DL schools and the comparison schools. We do not find this surprising for at least two reasons. First, as the action plan analyses showed, many of the team members' chosen efforts did not focus specifically on reading and mathematics. This reflects a tension between state and district efforts to target reading and mathematics performance and the leadership team members' assessments of their school priorities and needs. Second, the indirectness of the relationship between school leadership and student achievement is well documented (Supovitz, Sirinides, & May, 2010; Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004; Hallinger & Heck, 1998), and therefore it is hardly surprising not to detect a direct correlation between leadership interventions that work through various channels and student learning outcomes.

Finally, our research indicates places where, in retrospect, we would refine our theory of action to the reality on the ground. In hindsight, our evaluation oversimplified the processes through which distributed leadership team members, both individually and collectively, sought to exert instructional influence in their buildings. Our early model adopted a linear view whereby team-level change would lead to school-level change. But the data about how teams and individual members sought to effect change and influence their peers showed a process that was more nuanced and recursive. This, coupled with the critical importance of teacher teams (often in the form of grade groups or PLCs) suggests that a more sophisticated theory of change would both account for the diverse ways that team members sought to influence their colleagues as well as the likely uneven and fitful progress towards broader influence.

The Distributed Leadership project will go down in the annals of education as the first experiment focused on whether the theory of distributed leadership could be converted into a school improvement initiative. This five year experimental study produced abundant evidence – both qualitative and causal – that leadership teams can be developed to effectively work together and embrace the leadership skills and techniques to reach out to the wider faculty in their schools to facilitate instructional improvement. What is also clear from this research is that schools, particularly those in turbulent urban districts, do not necessarily contain the instructional infrastructure of curriculum materials, professional development, and resources that are the critical provisions for instructional improvement. School leaders need an instructional system around which to focus and organize their efforts. In this way, distributed leadership is best thought of not as a reform itself, but as an effective means of more deeply implementing reform.

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Appendix A.

Demographics of Distributed Leadership Schools

School	School Type	Cohort	Approximate Number of Students	Student / Teacher Ratio	Percent Asian	Percent Black	Percent Hispanic	Percent White	Percent Receiving Lunch Assistance
1	ES	1	500	17		98	1	1	72
2	ES	1	400	13	44	28	1	17	83
3	ES	1	575	17	6	87	5	1	89
4	ES	1	425	15		99			81
5	ES	2	1000	21	4	24	18	55	74
6	ES	2	350	14		98			91
7	HS	2	3000	20	21	36	15	28	52
8	HS	2	300	19		99	1		N/A
9	ES	3	1100	19	19	39	2	22	65
10	ES	3	700	18		99	1	1	87
11	MS	3	550	13	1	97	2	1	85
12	HS	3	575	21	13	57	16	14	44
13	ES	3	450	14		75	24	1	92
14	HS	3	1050	14	2	57	36	5	86
15	HS	3	1650	18	1	98	1	1	N/A
16	HS	3	300	15	1	98	1		33
	Mean		808	16.75	10	74	11	12	74
	SD		690	2.79	14	29	11	17	19
	Min		300	13.00		24	1	1	33
	Max		3000	21.00	44	99	36	55	92

Source: National Center for Educational Statistics, 2008- 2009

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