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Case Studies of Schools Receiving School Improvement Grants

Final Report

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NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE

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Executive Summary

The Study of School Turnaround (SST) examines the change process in a diverse, purposive sample of schools receiving federal School Improvement Grants (SIG) from 2010–11 to 2012–13. With the passage of the American Recovery and Reinvestment Act of 2009 (ARRA), the SIG program underwent three major shifts. First, ARRA boosted total SIG funding in fiscal year 2009 to approximately 6.5 times the original 2009 appropriation through Title I, section 1003(g) of the Elementary and Secondary Education Act (ESEA). SIG funds were distributed to states *by formula* based on each state's Title I share. States then had to *competitively* make SIG awards to districts with eligible schools. Second, ARRA targeted funds at only the very worst schools—those that were in the bottom 5 percent of performance and had been low performing for an extended period of time. Third, schools receiving SIG were now required to implement one of four prescriptive intervention models believed to be more aggressive and comprehensive than those generally adopted under prior policies (Hurlburt, Therriault, & Le Floch, 2012) (see Box ES.1). By increasing the level of funding, better targeting these funds to the persistently lowest-achieving schools, and requiring that schools adopt specific intervention models, the revamped SIG program aimed to catalyze more aggressive efforts to turn around student performance. This report focuses on a small sample of schools receiving SIG over the first three years of the revamped SIG program, from 2010–11 to 2012–13. It presents findings from the study's 25 core sample schools, which were the focus of data collection in spring 2011 and spring 2012, and a subsample of 12 of the 25 schools (collectively referred to as the core subsample), which were selected for data collection in spring 2013 and are the focus of more in-depth analyses looking across all three years of SIG.

Overview of Final Report Findings

- **A majority of the 25 core sample schools replaced their principal (21 schools) at least once in the year before SIG (2009–10) or in Year 1 of SIG (2010–11).** Two of the four SIG intervention models (transformation and turnaround) required the principal to be replaced either in the first year of SIG or in the year prior to SIG. By Year 2 of SIG (2011–12), 9 of the 25 core sample schools had replaced their principal twice; only three schools maintained the same principal across this three-year period. Of the 20 principals who were new to their schools in 2010–11 or 2011–12, half (10) were described by respondents[1] as an improvement over their predecessors.
- **About half of the 25 core sample schools (12 schools, including 9 turnaround, 2 restart, and 1 transformation) replaced at least 50 percent of their teachers during the 2009–10, 2010–11, or 2011–12 school years.** Respondents in 7 of these schools characterized the change in teachers as positive for the school, bringing new energy and improved morale. During the first two years of SIG, almost all core sample schools (24) created new non-teaching positions. The most commonly reported new non-teaching positions were instructional, technology, and data coaches (14 schools), followed by additional school administrators (11 schools). In the second year of SIG, the principal and district officials in about three fourths of the core sample schools (18 schools) indicated that recruitment and/or retention challenges limited the school's ability to build a skilled and motivated staff.

[1] This analysis, and others in which respondents report on changes from the prior year, excludes newly-hired school staff.

- **According to teacher survey data, more teachers reported participating in professional learning on math, literacy, and data use than on ELL instruction, special education, or classroom management during Year 2 of SIG (2011–12).** On average, surveyed teachers in two thirds of the core sample schools reported spending a larger proportion of their hours in job-embedded professional learning activities than in more traditional activities that year. [2] In 17 of 21 core sample schools with sufficient data, most teacher survey respondents reported learning and changing their practice after participating in professional learning on math, literacy, or data use.
- **Core sample schools reported receiving support from their district (22 of 22 schools[3]) and external support provider(s) (22 of 25 schools), but in some cases, respondents described shortcomings in their district or external support.** Respondents in 10 of 22 core sample schools with sufficient data perceived their district's support efforts to be useful to their school's improvement efforts.
- **Among the 12 core subsample schools, those that appeared to engage in more efforts to build human capital in Years 1 and 2 of SIG (7 schools) were more likely to improve their organizational capacity (or sustain their already higher capacity)**. Additionally, most teachers in 7 of the 12 core subsample schools reported on the Year 3 teacher survey that their school had changed in primarily positive ways during the three years of SIG. The quality of leadership in the 12 core subsample schools appears to be related to teachers' perceptions of school improvement, based on data from the teacher survey and site visits.
- **Sustainability of any improvements may prove fragile.** Core subsample schools that had higher levels of organizational capacity by Year 3 of SIG (2012–13) also had higher scores on the teacher survey scale measuring perceived sustainability. Of the 12 core subsample schools, which we followed for all three years of SIG, 2 schools appeared to have strong prospects for sustainability, 6 schools appeared to have mixed prospects for sustainability, and the remaining 4 schools appeared to have weak prospects for sustainability, according to teacher survey responses and site visit data.

These findings build upon an analysis of the change process in the case study schools following the first year of SIG implementation (2010–11) (Le Floch et al., 2014). Analysts used the data collected over the subsequent two years of SIG (2011–12 and 2012–13) to understand the ways in which the trajectory of these schools shifted over time. For most of the remainder of the Executive Summary, we discuss these key findings in additional detail by reviewing each main findings chapter in the report (Chapters 3–9). Chapters 3–7 present analyses of school efforts to build human capital among the 25 core sample schools. Chapters 8–9 take a closer look at the change process in 12 of the 25 core sample schools (core subsample) over all three years of SIG.

[2] The analyses of teachers' professional learning opportunities were designed to provide a snapshot of the professional learning activities that took place in core sample schools during Year 2 of SIG (2011–12). The study did not collect data on teachers' professional learning activities prior to SIG to address whether the professional learning activities that teachers reported in Year 2 were associated with SIG-supported school turnaround efforts.
[3] The three restart schools in the core sample were excluded from analyses of district support because they are managed by EMOs or CMOs.

Study Purpose and Methodology

SST is a set of case studies that documents the change process during a three-year period in SIG schools located in diverse state and local contexts. The case studies are designed to describe the characteristics of the schools, the decisions and strategies that the schools and their districts undertake, and the challenges they face in attempting to dramatically improve school performance. The study is based primarily on interviews and surveys, which, by nature, are self-reported. These data were not audited or validated with external sources. SST does not examine the impact of SIG on student achievement outcomes because the case study approach is not well-suited to investigate these questions rigorously, and, because of the limited sample size, it is not designed to document the practices of all, or even necessarily a representative sample of, SIG schools nationwide.[4] Rather, SST is an in-depth examination of how SIG funds and strategies have evolved in a small but diverse group of SIG schools over the three years of funding (2010–11 through 2012–13).

Box ES.1. Detail on SIG Program

According to the final rules issued by the U.S. Department of Education (ED) for the SIG program, persistently lowest-achieving schools are eligible to receive SIG and include a state's lowest-performing five percent of schools or five schools, whichever number is greater, in terms of overall academic performance for all students, *and* schools that exhibit a lack of progress toward achievement goals. SIG defines three eligibility tiers for persistently lowest-achieving schools, with Tier I and Tier II representing the highest priority for SIG funding, and Tier III representing the lowest priority. One of four intervention models must be specified for implementation in each Tier I and Tier II school identified in a district's SIG application to its state for funding (Hurlburt, Therriault, & Le Floch, 2012). The key requirements for each model are as follows:

Turnaround model. Replace the principal and no less than 50 percent of the staff, introduce significant instructional reforms, increase learning time, and provide the school sufficient operational flexibility (e.g., staffing, time, and budgeting) and support (e.g., ongoing, intensive technical assistance and related support).

Restart model. Reopen the school under the management of a charter school operator, a charter management organization (CMO), or an education management organization (must enroll, within the grades served, any former student who wants to attend the school).

School closure. Close the school and reassign students to higher-achieving schools.

Transformation model. Replace the principal, develop a teacher and leader evaluation system that takes into account student progress, introduce significant instructional reforms, increase learning time, and provide the school sufficient operational flexibility and support.

These models are consistent with those defined in other ARRA-funded initiatives, including Race to the Top and the State Fiscal Stabilization Funds, Phase 2. For more information on SIG requirements, see ED's webpage on SIG legislation, regulations, and guidance (http://www2.ed.gov/programs/sif/legislation.html).

[4] IES is conducting an evaluation of SIG (Implementation and Impact Evaluation of Race to the Top and School Improvement Grants) to examine the impact of SIG on school and student outcomes using a larger sample of schools and methods more appropriate for estimating impacts and how they are correlated with various broader measures of implementation. These findings are anticipated by the end of 2016.

The study team collected data from stakeholders at the state, district, and school levels. The school sample was selected to include variation in state, district, and school characteristics hypothesized to be associated with implementation patterns and turnaround success. Analysts initially identified a base sample of 60 schools from the cohort of schools awarded SIG funds in summer 2010. Closure schools were not included, and restart schools were oversampled. The final base sample includes turnaround, restart, and transformation schools, with the majority of the sample being transformation schools (as it is in SIG-funded schools nationwide). From this base sample of 60 schools, we selected three subsamples: the core sample, the rural sample (see Rosenberg et al., 2014), and the sample of schools with a high proportion of English language learners (ELLs) (see Boyle et al., 2014; Golden et al., 2014). This report is based on the findings from the 25 *core sample* schools, which were the focus of data collection in spring 2011 and spring 2012, and from a subsample of 12 of these 25 schools (*core subsample*), which were selected for data collection in spring 2013 and as the focus of more in-depth analyses looking across all three years of SIG.

The data collection in spring 2011, 2012, and 2013 included a teacher survey and a site visit from two study team members to conduct interviews and focus groups with a range of district and school stakeholders, including district officials (i.e., superintendents, SIG directors, and other district personnel), principals, teachers, instructional coaches, school improvement teams, external support providers (i.e., curriculum/instructional providers, school turnaround organizations, CMOs), union representatives, students (in high schools only), parents, and community members. The complete set of data collection instruments can be found at http://www.air.org/project/study-school-turnaround.

The site visit data were analyzed by coding transcribed interview notes using Atlas.ti® (a qualitative software program) and compiling the results into an online data repository. The teacher survey data were then used in conjunction with the qualitative data to examine patterns by school level, SIG intervention model, and other school characteristics (see Chapter 2 for a more detailed discussion of the sample selection, data collection activities, and analytic procedures).

Throughout this report, we incorporate direct quotations from study respondents. There are two primary reasons for the inclusion of quotations: one methodological and the other stylistic. With regard to methodology, by providing example quotations with explanations of our analytic measures rather than merely describing these measures in the abstract, we can more concretely illustrate how analysts coded the raw data. This approach lends more transparency to how the measures were constructed and allows the reader to better judge whether the measures appear well grounded. With regard to style, direct quotations enhance the clarity and relevance of the study, which is based largely on qualitative data. These data provide uniquely detailed, contextual information that can convey meaning through illustrative examples. Quotations were purposefully selected to enrich the findings that were arrived at through systematic, carefully documented analyses. These quotations are not representative of all of our data and are only meant to enrich a particular finding, not formally justify it.

Overview of Year 1 Findings

Data collection began during the first year of funding for Cohort I SIG schools (2010–11) in an effort to understand the characteristics of the case study schools, the decisions and strategies that the schools and school districts undertook (and why), and the challenges faced by stakeholders as they attempted to dramatically improve school performance. The Year 1 report (Le Floch et al., 2014) addressed questions related to the context of the case study schools, the role of school leaders in Year 1 of SIG, initial improvement actions undertaken by SIG schools after being awarded the grant, the role of SIG in the

initial change process, organizational capacity at the end of Year 1, and perceived improvement during the first year of implementation.

Five key findings emerged from the analysis of activities in these 25 schools during the first year of SIG:

- **Although all were low-performing, core sample schools differed in their community and fiscal contexts, their performance and reform histories, and their interpretations of the causes of—and potential solutions for—their performance problems**.
- **Approaches to leadership varied across the set of core sample schools with most principals exhibiting a mix of leadership qualities.** The most frequently reported leadership approach among the core sample schools was transformational leadership, referring to principals who can develop leaders and motivate and engage their staff behind a strong organizational vision. Although respondents in the majority of schools reported some improvement in 2010–11, **schools in which respondents described the improvements in the greatest number of areas also had higher levels of principal strategic leadership** (referring to principals who are able to formulate a strategy for school improvement and translate that strategy into concrete priorities and specific actions) **and were more likely to have experienced a disruption from past practices**.
- **For most of the core sample schools, respondents did not perceive SIG as the primary impetus for the change strategies that had been adopted.** In 19 of these schools, the improvement strategies and actions implemented during the first year of the grant (2010–11) were reportedly a continuation of activities or plans that predated SIG.
- **At the time of data collection, 7 of the 25 core sample schools had experienced a visible disruption from past practice.** The remaining schools appeared to be following a more incremental approach to improvement.
- **Overall, core sample schools with the lowest levels of organizational capacity in 2010–11 were those in which teachers reported having fewer resources, the SIG award represented a larger percentage of the prior year's per-pupil expenditure, and respondents perceived the SIG award as a catalyst for change**.

Key Final Report Findings

Building Human Capital through Leadership Strategies (Chapter 3)

Case study research posits that principals hold a central role in leading major school reform efforts (Edmonds, 1979; Hassel & Hassel, 2007; Herman et al., 2008; Johnson & Asera, 1999; Picucci et al., 2002; Rhim et al., 2007; Whiteside, 2006). The SIG program requires principal replacement as part of the turnaround and transformation models in schools where the principal has been in place for more than two years prior to SIG (U.S. Department of Education, 2010).[5] Empirical studies and theoretical explorations of leadership have asserted that leadership in a school setting may come from multiple sources and be distributed across multiple individuals and structures (Elmore, 2000; Spillane, Halverson, & Diamond, 2004). We therefore examined the extent of principal replacement in the 25 core sample schools through the first two years of SIG implementation, as well as the ways in which principals in

[5] In addition, schools adopting the restart model often replace principals as they transition to a new governance structure.

these schools used distributed leadership to leverage the knowledge and skills of multiple staff members to enhance collective leadership capacity.

A majority of the 25 core sample schools (21 schools) replaced their principal at least once in the year before SIG (2009–10) or in Year 1 of SIG (2010–11). Two of the four SIG intervention models (transformation and turnaround) required the principal be replaced either in the first year of SIG or in the year prior to SIG. By Year 2 of SIG (2011–12), 9 of 25 core sample schools replaced their principal twice; only three schools maintained the same principal over this three-year period.

Of the 20 principals who were new to their schools in 2010–11 or 2011–12, half (10) were described as an improvement over their predecessors by teachers, instructional coaches, school leadership teams, or parents. Fourteen of the 20 new principals had between 5 and 10 years of experience as principals at others schools, in addition to longer-term experience as teachers and/or assistant principals in low-performing schools.

School leaders' approaches to sharing leadership responsibilities among school stakeholders and engaging school staff in decision-making processes differed across the 25 core sample schools with respondents at 7 schools providing evidence of distributed leadership during Year 2 of SIG (2011–12). Respondents at 12 schools provided evidence of moderately distributed leadership, while respondents at the remaining 6 schools provided little evidence of distributed leadership.

Respondents in over half of the 25 core sample schools (15 schools) reported that administrators made efforts to enhance distributed leadership during the first two years of SIG. Though these efforts differed by school, principals often promoted distributed leadership through the creation of new teams or committees, the addition of new staff to existing teams, leadership opportunities for teachers and coaches, and additional ways for school staff to provide input into the decision-making process. In the remaining 10 schools, the principals did not report developing distributed leadership during the first two years of SIG.

Building Human Capital through Staffing Decisions (Chapter 4)

SIG required that schools implementing the turnaround model replace at least 50 percent of instructional staff. This requirement rests on the assumption that the existing staff in persistently low-performing schools may not have the necessary knowledge, skills, or motivation needed to dramatically alter school performance, and that replacing them with more qualified individuals will help yield school improvement (Perlman & Redding, 2011). To gain a better understanding of staff replacement and its implications for building human capital, we examined school staffing strategies aimed at teachers and other school-level support staff in the 25 core sample schools through the first two years of SIG implementation. In addition, we explored the challenges of recruiting and retaining high-quality teachers among the core sample schools, and identified the supports that district provided to address those challenges.

About half of the 25 core sample schools (12 schools) replaced at least 50 percent of their teachers during the 2009–10, 2010–11, or 2011–12 school years. For nine of these schools, the changes were made to comply with the requirements of the turnaround model being implemented; two schools did so as part of their new charter management organizations, and one school did so as part of the principal's school improvement plan. Respondents at seven schools characterized the change in teachers as positive for the school, bringing new energy and improved morale.

During the first two years of SIG, almost all 25 core sample schools (24 schools) created new non-teaching positions. The most common new position were coaches (including instructional, technology,

and data coaches) (14 schools), followed by additional school administrators (11 schools). Schools also added other nonteaching positions, such as parent or community liaisons to coordinate activities and build relationships with parents and community-based organizations, social workers to address specific student needs such as homelessness, and technology coordinators.

In about half of the 25 core sample schools (12 schools), principals provided evidence that staffing decisions were made with specific school needs or goals in mind. Purposeful staffing decisions included the implementation of strategies to minimize the impact of less effective staff and using student data to identify areas where more effective instruction is needed. Of the principals that did not provide evidence of purposeful approaches to staffing (13 schools), some described district policies that limited their ability to make intentional staffing decisions; however, these principals did not describe ways to maximize existing staff capacity to support students, or efforts to remove undesirable hires.

In the second year of SIG, principals and district officials in about three fourths of the 25 core sample schools (18 schools) reported that recruitment and/or retention challenges limited the school's ability to build a skilled and motivated staff. Within these schools, principals and district officials most often (12 schools) attributed district-level conditions and policies to recruitment and retention challenges (such as layoffs, involuntary transfers, and hiring processes that limited teacher applicant pools). School-level challenges, such as stressful school environment, poor school reputation, or long commutes to school were reported less often (7 schools). Principal and district officials in the remaining seven core sample schools did not indicate that recruitment or retention presented a challenge for the school in Year 2 of SIG (2011–12); these schools all had stable teaching staffs during that school year.

Principals and district officials in nine schools across seven districts reported that their districts provided advantages to SIG schools in the hiring process to better enable them to recruit qualified staff. In addition, teachers in eight schools across four districts reportedly received a monetary bonus for working at the school,[6] and principals in two schools reported extra supports for teachers to alleviate the expense of their long commutes to the school.

Efforts to Build Human Capital Using Teacher Professional Learning Strategies (Chapter 5)

In the first year of SIG (2010–11), the most common improvement action undertaken by the 25 core sample schools was to increase professional learning opportunities, including during the school day, during summer months, or on specific professional learning days (Le Floch et al., 2014). This reform strategy is cited as an approach to improve student outcomes in low-performing schools (Opfer & Pedder, 2011) and is required for schools adopting the SIG turnaround and transformation models. We examined several aspects of professional learning in the 25 core sample schools through the first two years of SIG implementation that are intended to increase teacher learning and, ultimately, the human capital of the school. We explored the number of hours that teachers reported participating in such professional learning activities, the degree to which the activities appeared to be purposeful or tied to schools' goals, the extent to which schools balanced job-embedded professional learning activities with traditional ones, and, finally, how teachers reported change in their own practice based on their professional learning experiences.

[6] Other types of monetary benefits, such as performance-based incentives paid if certain student improvement goals are met and extra pay for working during extended hours or participating in additional professional learning opportunities, were not included in this analysis.

Teachers' participation in professional learning activities varied within and across schools based on Year 2 (2011–12) teacher survey data. Among the 25 core sample schools, the median number of hours ranged from 0 to 187 hours, with the difference between the 25th and 75th percentiles ranging from 36 to 158 hours.

More teachers in core sample schools reported participating in professional learning on math, literacy, and data use than on ELL instruction, special education, or classroom management. In both high schools and elementary schools, the most common professional learning topics were math and literacy instructional strategies and data use (see Exhibit ES.1).

Exhibit ES.1.
Percentage of Teachers Reporting Participating in Professional Learning, by Topic, 2011–12

Topic	Percentage of Elementary School Teachers Reporting Participating in Professional Learning	Percentage of High School Teachers Reporting Participating in Professional Learning
Teaching students with disabilities	31.4%	43.8%
Teaching English language learners	41.3%	44.2%
Classroom management	44.2%	45.2%
Mathematics instructional strategies	61.8%	78.2%
Literacy instructional strategies	77.0%	84.3%
Data use	80.2%	62.2%

Source: SST teacher survey, spring 2012.
Notes: Includes 23 of 25 core sample schools (*N* = 794 teachers). At the high school level, the percentage of teachers reporting participation in "mathematics instructional strategies" includes only self-identified mathematics teachers, and the percentage of teachers reporting participation in "literacy instructional strategies" includes only self-identified English language arts teachers. Two schools were excluded from this analysis because they did not meet the 50 percent response rate threshold on the teacher survey. Professional learning hours categorized as "other" were excluded from this analysis.

Principals and teachers in six core sample schools articulated connections between offered professional learning activities and the school's goals or needs. However, in the majority of schools (15 schools), respondents offered mixed perceptions about whether their professional learning addressed the needs of the school. Respondents in four schools were not able to articulate connections between the activities offered and the school's needs. The activities appeared to be unrelated to the school's performance goals, improvement plans, or student needs.

On average, surveyed teachers in nearly two thirds of the 25 core sample schools (15 schools) reported spending a larger proportion of their hours in job-embedded professional learning activities than in more traditional activities. Job-embedded professional learning activities included, for example, classroom coaching, structured common planning time, meetings with mentors, consultation with outside experts, and observations of classroom practice. On the other hand, traditional formats included teacher workshops, conferences, and college-degree courses, among others. These activities tended to be conducted outside the teachers' regular classroom setting and in concentrated blocks of time (e.g., over the summer or on a monthly basis).

Respondents in the majority of the 25 core sample schools reported making efforts to enhance teacher learning by establishing policies, structures, and systems that would support data use (19 schools) and teacher collaboration (16 schools) during the first two years of SIG. Across schools, approaches to support data use included establishing student data systems and incorporating benchmark assessments into instruction, among others. The most prevalent way that schools

established conditions to support teacher collaboration was to establish a protected time for teachers to work together across grades, within a grade, or within a subject.

In 17 of 21 core sample schools with sufficient data, most teachers reported learning and changing their practice after participating in professional learning on math, ELA, or data use (the three most commonly reported professional learning topic areas). In 12 schools, teachers most commonly reported changing their practice in ELA.

District and External Support Providers' Efforts to Build Human Capital in SIG Schools (Chapter 6)

In addition to building the human capital capacity of SIG schools by changing the composition of staff (through replacement, recruitment, and retention strategies) and through professional learning, SIG guidance recognizes the important role that districts and external support providers play in the improvement efforts of SIG schools. Research on school improvement points to the important role of districts and external support providers in the reform process, explaining that external providers may provide knowledge, training, and services that school-level staff cannot (Finnigan, Bitter, & O'Day, 2009; Honig, 2004; Massell & Goertz, 2002; O'Day & Bitter, 2003; Supovitz, 2006; Zavadsky, 2012). To understand the ways in which districts and external support providers enhanced the capacity of the 25 core sample schools – or the ways in which they did not – we explored the types of organizations that are partnering with SIG schools, the types of support being provided to them, the fit and intensity of such support (external support providers only), and the extent to which school-level respondents perceived the partnerships to be beneficial for their school's improvement efforts.

Respondents from all 22 core sample schools included in the district support analyses[7] reported that their district provided them with at least one of the following: teacher professional learning activities (20 schools), principal professional learning activities (15 schools), supportive teacher staffing policies (14 schools), and structures and systems to support data use (13 schools). Examples of professional learning services provided by districts to SIG schools included workshops focused on specific district priorities such as data use or literacy/mathematics instructional strategies, as well as district-funded instructional coaching.

Respondents in 9 of the 13 core sample districts, which served a total of 16 core sample schools, reported having sub-districts or designated staff positions in place to support low-performing schools during Year 2 of SIG (2011–12). Of these nine districts, four districts, serving nine core sample schools, established sub-districts, often referred to as "zones," whose role was oversight and support for the turnaround efforts in specific sets of low-performing schools, including SIG schools. Five districts, serving seven core sample schools, did not create new sub-districts but did establish central office positions or teams charged with overseeing and supporting SIG schools. Schools in these nine districts tended to report receiving support in more areas than schools in the remaining four districts, which reportedly did not have any specialized structures in place to support SIG schools.

Respondents in 10 of the 22 core sample schools included in the district support analyses perceived their district's support efforts as useful to their schools' overall improvement efforts. In these schools, respondents spoke positively about their interactions with district staff, the accessibility of district staff, and the overall level and types of support they received from the district. Respondents in eight schools

[7] The three restart schools in the core sample were excluded from these analyses because they are managed by EMOs or CMOs.

expressed mixed perceptions of the district's efforts to support their school's improvement, while respondents in three schools indicated that district efforts (or lack thereof) were constraining school-level improvement efforts. The one remaining school was excluded from this analysis due to insufficient data.

Respondents in 22 of the 25 core sample schools reported receiving support to build human capital such as professional learning (22 schools) or staffing support (3 schools) from an external support provider during Year 2 of SIG (2011–12). Among these 22 schools, 19 reported receiving support from 1 to 3 providers, while the remaining 3 schools reported receiving support from 4 to 6 providers. Providers included colleges and universities, CMOs, EMOs, school turnaround organizations, curriculum developers, consultants from SEAs, and other organizations (such as local counties or advisory boards).

Respondents in 13 of the 25 core sample schools reported receiving external support from a "SIG partner," an organization or individual that was considered central to the change process under SIG. Collectively, these schools identified a total of 17 SIG partners. Of the 15 SIG partners with sufficient data, 11 were described by respondents as being an appropriate fit for the school in terms of their expertise and experience.

Overall, respondents described 12 of the 15 SIG partners with sufficient data in positive terms, reporting that the services, advice, or feedback they received contributed to the school's improvement efforts. Respondents described the remaining three SIG partners in mixed terms. In these instances, respondents identified ways in which the SIG partner's support was useful but also noted areas where the SIG partner's support was lacking.

Conclusion to Part II (Chapter 7)

The 25 core sample schools engaged in various efforts to build human capital during the first two years of SIG. However, such efforts are often undertaken in conjunction with other improvement actions. Thus, to gain a broader understanding of each school's overall efforts to improve capacity and the differences among them, we developed an aggregate measure. The aggregate measure included: efforts to build structures for distributed leadership; efforts to build structures to support teacher collaboration; efforts to build structures to support data use; the replacement of 50% of teachers; the addition of noninstructional staff; a purposeful approach to staffing and professional learning that is aligned to school goals and needs; hours of professional learning; the presence of designated staff to support SIG schools; and a SIG partner to support the school. Most indicators were scored according to a binary system, with 0 assigned to the negative category (e.g., "no evidence," "not identified") and 1 to the affirmative category (e.g., "identified").

In addition to variation in the specific activities that each school implemented, our aggregate measure suggests variation across the 25 core sample schools in the number of efforts to build human capital during the first two years of SIG. Aggregate ratings of school efforts to build human capital ranged from 2.5 to 8.5 out of a maximum possible rating of 10, with 12 core sample schools scoring above 6, and 13 scoring 6 or below. There was no apparent association between a school's aggregate measure of efforts to build human capital and its SIG intervention model, external context, urbanicity, or teachers' average years of experience.

The most common approach to building human capital among the 25 core sample schools was adding noninstructional staff positions. All but one core sample school reported adding such staff in either Year 1 or 2 of SIG, and 13 of these schools reported adding such staff in both years.

The four core sample schools in which respondents described SIG as the primary impetus for change in Year 1 of SIG (see Le Floch et al., 2014) had a higher aggregate score of human-capital-building efforts than did schools in which SIG was not perceived to be an impetus for change. The four schools in which SIG was perceived as the primary impetus for change in Year 1 scored an average of 7.75 on our aggregate measure of human-capital-building efforts, compared with an average score of 5.67 among the 21 schools in which respondents did not perceive SIG as the impetus for change.

Changes in Perceived Improvement and School-Level Capacity to Improve Student Learning (Chapter 8)

SIG was intended to provide the impetus and means necessary for persistently low-performing schools to take dramatic and purposeful action toward improving school and student outcomes. To understand how school stakeholders perceived their schools to have changed over the three years of SIG, and the ways in which schools shifted in their organizational capacity, we explored the commonalities and distinguishing features of a subsample of 12 of the 25 core sample schools (collectively referred to as the core subsample), which had complete site visit and teacher survey data over the three years.

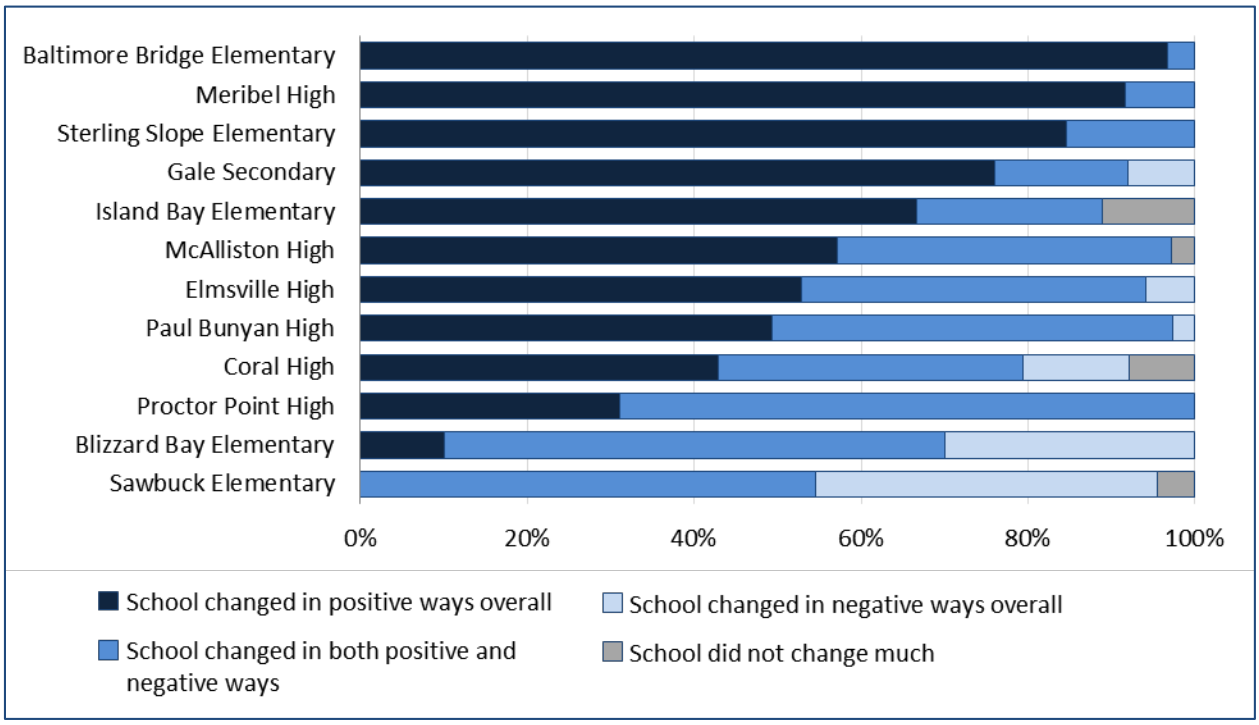
Most teachers in 7 of the 12 core subsample schools reported on the Year 3 teacher survey that their school had changed in primarily positive ways throughout the course of SIG (see Exhibit ES.2). Across all 12 schools, the average percentage of teachers who reported overall positive improvement was 53 percent, compared with 8 percent of teachers who reported negative changes overall. There was, however, variation across schools, with the percentage of teachers who reported that their school had changed in primarily positive ways ranging from 0 percent in one core subsample school to 97 percent in another.

The quality of leadership in the 12 core subsample schools appeared to be related to teachers' perceptions of school improvement, based on data from the teacher survey and site visits. In Year 3 of SIG (2012–13), teachers in all 3 of the 12 core subsample schools whose principals were reported as exhibiting higher levels of teacher trust and overall leadership (including transformation, instructional, and strategic leadership) also reported the highest levels of perceived improvement over the three years of SIG (see Le Floch et al. [2014] for more detail on the analyses of principal leadership). Conversely, the four core subsample schools with the lowest aggregate ratings across our leadership measures were also the ones whose teachers reported the lowest levels of perceived improvement over the course of SIG.

A school's level of organizational capacity in Year 3 of SIG (2012–13) appeared to be related to their organizational capacity in Year 1 (2010–11). All four core subsample schools that had relatively lower organizational capacity in Year 1 appeared to improve to moderate or higher capacity by Year 3. Among the four schools with moderate capacity in Year 1, three remained moderate by Year 3. Similarly, all four schools with higher levels of capacity in Year 1 maintained a high level of capacity by Year 3.

Schools that appeared to make more effort to build human capital in Years 1 and 2 of SIG were more likely to improve their organizational capacity (or sustain their already higher capacity) than schools that appeared to make less effort to build human capital. Three of the seven core subsample schools that reported many efforts to build human capital improved their organizational capacity from Year 1 to Year 3. Among the five core subsample schools that reported fewer efforts to build human capital in Years 1 and 2 of SIG, one increased organizational capacity in Year 3 and three remained stable, while one decreased organizational capacity.

Exhibit ES.2.
Overall Perceived Improvement During SIG, by Core Subsample School, 2010–13



Source: SST teacher survey, spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

Sustainability of the Improvement Process (Chapter 9)

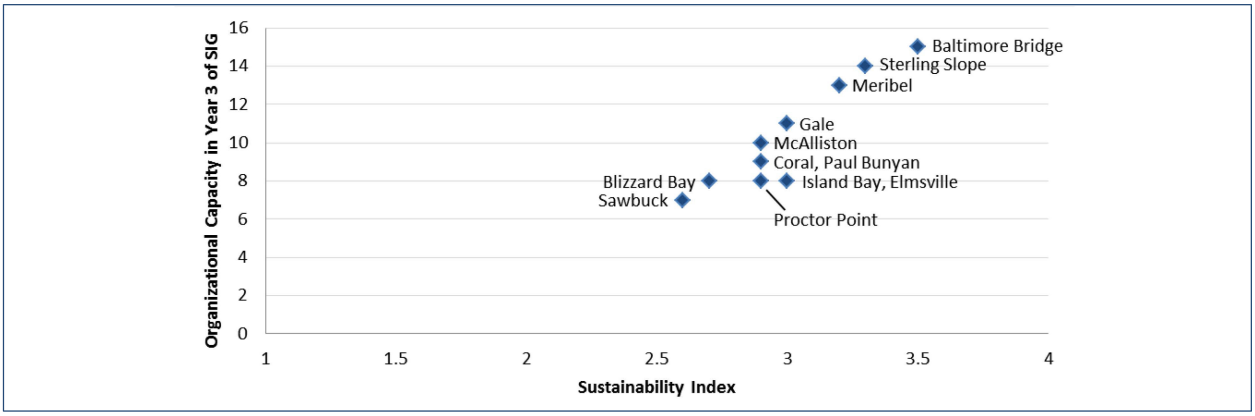
Research suggests that sustainability entails maintaining, extending, and adapting improvement efforts in an unremitting reflective process (Jerald, 2005). Researchers have reported a relationship between school capacity and the ability to sustain reform efforts (Florian, 2000; Taylor, 2006). Though the SIG award is a temporary infusion of funds, the aim is ultimately to help set schools on a path of improvement that will continue beyond the course of the grant. We explored the relationship between organizational capacity and predicted sustainability among the 12 core subsample schools, as well as the schools' overall prospects for sustaining the reform efforts in the years beyond SIG.

Core subsample schools that had higher levels of organizational capacity by Year 3 of SIG (2012–13) also had higher scores on the teacher survey scale measuring perceived sustainability (see Exhibit ES.3).

Respondents most often cited human capital as a risk factor for sustaining reform efforts beyond SIG. In particular, respondents in 9 of the 12 core subsample schools expressed concern about losing staff; respondents in 2 of the 12 schools explicitly linked sustainability concerns to an impending change in school leadership. In 5 of the 9 schools where respondents identified the loss of staff as a threat to sustainability, respondents anticipated losing staff whose positions were funded through SIG, including instructional coaches, dropout prevention staff, and community or parent-community coordinators. However, staff in 5 of these schools also believed that they would be able to retain at least some of the staff newly hired through SIG. Respondents in 4 of the 12 core subsample schools already knew that

they were going to experience a change in leadership in fall 2013, and respondents in 2 of those schools explicitly associated sustainability concerns with the impending loss of their current principal.

Exhibit ES.3.
Perceived Sustainability Index and Organizational Capacity, 2012–13



Source: Sustainability index: SST teacher survey, spring 2013. Organizational capacity index: Principal, instructional coach, and teacher interviews; teacher, leadership team, and community focus groups; SST teacher survey, spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

Of the 12 core subsample schools, which we followed for all three years of SIG, 2 appeared to have strong prospects for sustainability, 6 schools appeared to have mixed prospects, and the remaining 4 schools appeared to have weak prospects for sustainability, according to teacher survey responses and site visit data. At the two schools with strong prospects for sustainability, respondents expressed confidence that their schools had the resources to sustain and build upon their improvements.

Schools' prospects for sustainability appear to be unrelated to several variables that might be hypothesized to predict sustainability, such as the size of the school's grant relative to baseline spending, enrollment, school level, or the type of SIG intervention model.

Respondents in 2 of the 12 core subsample schools provided evidence of ownership of the improvement process by Year 3 of SIG (2012–13). In the remaining 10 schools, not enough data were collected to make an assessment of ownership.

Conclusion

The school change process is complex, and crafting policy that acknowledges this complexity while compelling change has challenged policymakers for decades. Low-performing schools are not blank slates, on which new interventions and individuals can be imposed and assumed to stimulate better outcomes for children. These new policies are inserted into a complex policy context, history, and set of assumptions about each school. Our study provides evidence that these persistently low-performing schools could potentially change, at least in the short term, after engaging in numerous efforts to build human capital. Sustaining these changes may require an equally great effort to retain any hard-won improvements.

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Acknowledgments

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Although we appreciate the assistance and support of all of the above individuals, any errors in judgment or fact are, of course, the responsibility of the authors.

Disclosure of Potential Conflicts of Interest

The research team for this study consists of a prime contractor, American Institutes for Research (AIR), and three subcontractors, Mathematica Policy Research, Inc., Decision Information Resources, Inc., and Education Northwest. None of these organizations or their key staff has financial interests that could be affected by findings from the Case Studies of Schools Receiving School Improvement Grants Final Report, as part of the Study of School Turnaround.

Part I: Setting the Stage

Chapter 1: Introduction

The Study of School Turnaround (SST) examines the improvement process in a diverse, purposive sample of schools receiving School Improvement Grants (SIG) under Title I Section 1003(g) of the Elementary and Secondary Education Act (ESEA). SIG provides formula-based federal funds to states that then competitively award the funds to districts applying for SIG on behalf of their low-performing schools. SIG schools use the funds to implement improvement strategies. First authorized in 2001, SIG received relatively low levels of funding until the passage of the American Recovery and Reinvestment Act of 2009 (ARRA), which injected $3 billion into the program. This study focuses on schools that received SIG as part of the first cohort of grantees after ARRA to implement improvement strategies over three years, from 2010–11 to 2012–13.

Policy Overview

Congress introduced provisions to ESEA in 1988 to hold schools accountable for improving the performance of their students. The 1994 ESEA authorization (Improving America's Schools Act) tied these provisions to state-adopted standards in reading and mathematics, and introduced the notion of adequate yearly progress (AYP). The 2001 ESEA reauthorization (No Child Left Behind Act or NCLB) specified criteria for identifying low-performing schools and required actions and interventions intended to improve student outcomes in schools that failed to meet AYP. By 2008–09, 12,599 schools nationwide had been identified for improvement, corrective action, or restructuring under Title I of ESEA (Taylor et al., 2010). Of these, 5,017 schools were in restructuring status, meaning that they had failed to meet AYP for at least five years (Taylor et al., 2010).

Although SIG was first created with the 2001 ESEA reauthorization under Title I Section 1003(g), new guidance for SIG issued in 2010 by the U.S. Department of Education (ED) sought to strengthen the program in two ways.[8] First, SIG sought to further prioritize the nation's worst schools by concentrating SIG resources in those schools that were performing especially poorly for a number of years. Although NCLB aimed to identify low-performing schools, the AYP criteria did not focus only on schools with the lowest overall performance. For example, an NCLB-identified school may have missed AYP targets for one subgroup or a single subject area, rather than for all subgroups and both English language arts (ELA) and mathematics. Under the 2010 SIG guidance, schools were now classified into three eligibility tiers based on their overall performance. ED required states to prioritize SIG awards to Tier I and Tier II schools, which had the worst achievement levels among schools eligible for SIG:

- **Tier I** includes any Title I school in improvement, corrective action, or restructuring that (1) is among the lowest achieving 5 percent of the schools in these school improvement categories in the state or (2) is a high school that has had a graduation rate below 60 percent for a number of years. States have the option of identifying Title I-eligible[9] elementary schools that (1) are no

[8] For more information on SIG, see the U.S. Department of Education's webpage on SIG legislation, regulation, and guidance (http://www2.ed.gov/programs/sif/legislation.html).

[9] Title I-eligible schools refer to those schools that do not receive Title I funds but may meet the criteria for obtaining the funds.

higher achieving than the highest achieving school in Tier I and (2) have not made AYP for at least two consecutive years or are in the state's lowest quintile based on proficiency rates.

- **Tier II** includes any secondary school that is eligible for but does not receive Title I, Part A funds and (1) is among the lowest achieving 5 percent of such secondary schools in the state, or (2) has had a graduation rate below 60 percent for a number of years. (States also may identify Title I-eligible secondary schools that (1) are no higher achieving than the highest achieving school identified as a persistently lowest achieving school in Tier II or have had a graduation rate of less than 60 percent during a number of years, and (2) have not made AYP for at least two consecutive years or are in the state's lowest quintile based on proficiency rates.)
- **Tier III** includes the remaining Title I schools in improvement, corrective action, or restructuring that are not Tier I schools. (States have the option of identifying as Tier III schools Title I-eligible schools that (1) do not meet the requirements to be in Tier I or Tier II, and (2) have not made AYP for at least two consecutive years or are in the state's lowest quintile based on proficiency rates.)

Second, SIG aimed to catalyze more aggressive improvement efforts by requiring grantee schools to adopt one of four specific intervention models. Although NCLB delineated a set of corrective actions, identified schools tended not to adopt the most aggressive ones. For example, schools that failed to meet AYP targets for at least five years (and were thus in restructuring status) had five options: (1) replace all or most of the school staff, (2) allow the state to take over the school, (3) reopen the school as a public charter school, (4) contract with a private entity to manage the school, or (5) implement "any other major restructuring of the school's governance arrangement that makes fundamental reforms, such as significant changes in the school's staffing and governance, to improve student academic achievement in the school and that has substantial promise of enabling the school to make AYP as defined in the State plan" (NCLB, 2001). The National Longitudinal Study of NCLB found that in 2006–07, 22 percent of the schools in restructuring status had implemented one of the first four more stringent options (Taylor et al., 2010). An earlier U.S. Government Accountability Office (2007) report similarly found that about 40 percent of the schools in restructuring had not implemented any of the five options. Under the 2010 SIG guidance, Tier I and Tier II schools that received SIG were required to implement one of four intervention models. The key requirements for each model are as follows:

1. **Turnaround model:** Replace the principal and no less than 50 percent of the staff, introduce significant instructional reforms, increase learning time, and provide the school sufficient operational flexibility (i.e., staffing, time, and budgeting) and support (e.g., ongoing, intensive technical assistance and related support).
2. **Restart model:** Reopen the school under the management of a charter school operator, a charter management organization, or an education management organization (must enroll, within the grades served, any former student who wants to attend the school).
3. **School closure:** Close the school and reassign students to higher achieving schools.
4. **Transformation model:** Replace the principal, develop a teacher- and leader-evaluation system that takes student progress into account, introduce significant instructional reforms, increase learning time, and provide the school sufficient operational flexibility and support.

Each state's SIG allotment is determined by a formula based on Title I allocations. In turn, state education agencies (SEAs) award funds to local education agencies (LEAs) with eligible schools, based on a competitive application process. Awards must be made based on the eligibility tiers established by the federal guidelines and in accordance with SEA determinations of LEA capacity and commitment to

support school turnaround. SEAs were able to award LEAs up to $2 million annually over three years for each qualified SIG school.[10]

With passage of ARRA in 2009, the SIG program received an additional $3 billion to go with its regular appropriations. Between fiscal years 2009 and 2012, SIG infused over $5 billion in total to the nation's persistently lowest-achieving schools (see Exhibit 1.1). During this time period, SEAs held competitions for two cohorts of LEAs. Cohort I, the focus of this study, included districts and schools that received SIG to implement reforms beginning in the 2010–11 school year and continuing through the 2012–13 school year. Cohort II included districts and schools that received SIG to implement reforms beginning in the 2011–12 school year and continuing through the 2013–14 school year. Box 1.1 describes the demographic characteristics, models, and funding levels of the first cohort of SIG schools nationwide.

Exhibit 1.1.
Annual Federal Appropriations for SIG From 2007 to 2012

Fiscal Year	Amount	Funding Recipients
2007	$125,000,000	Pre-ARRA grantees
2008	$491,265	Pre-ARRA grantees
2009	$3,546,000,000*	Cohort I grantees: *Years 1, 2, and 3 of implementation (2010–11 to 2012–13)*
		Cohort II grantees:
2010	$546,000,000	*Year 1 of implementation (2011–12)*
2011	$535,000,000	*Year 2 of implementation (2012–13)*
2012	$535,000,000	*Year 3 of implementation (2013–14)*

Source: U.S. Department of Education School Improvement Grants website: http://www2.ed.gov/programs/sif/funding.html. Originally published in Hurlburt, Therriault, & Le Floch (2012).
Notes: Each grantee school typically receives an award to implement reforms for three years. States with fiscal year (FY) 2009 carryover funds (i.e., unused funds from their Cohort I competition) were allowed to use these funds to make similar three-year awards in their Cohort II competition. Thus, Cohort II grantees also include schools awarded SIG through carryover funds from FY 2009.
*Includes the regular appropriation of $546 million from Title I Section 1003(g), as well as $3 billion from ARRA.

[10] The Consolidated Appropriations Act (2010) raised the maximum funding amount for a participating school from $500,000 to $2,000,000 per year.

Box 1.1. Key Findings From the Cohort I Baseline Report

Number and characteristics of SIG schools. Among the 49 states (and the District of Columbia) with available data, 1,228 schools received SIG. SIG schools were more likely to be high poverty (68 percent of students in SIG schools were eligible for free or reduced-price lunch compared with 45 percent of students nationwide), high minority (73 percent of students in SIG schools are students of color compared with 45 percent of students nationwide), and located in urban areas (53 percent of SIG schools were in large or middle-sized cities compared with 26 percent of schools nationwide). They were also more likely to be high schools (40 percent of SIG schools were high schools compared with 21 percent nationwide).

Intervention models adopted. Among Tier I and II SIG schools, 74 percent adopted the transformation model, 20 percent adopted the turnaround model, 4 percent adopted the restart model, and 2 percent adopted the school closure model. In 16 states, the transformation model was the only intervention model adopted by Tier I and II SIG schools.

Absolute SIG award levels. SIG awards varied in absolute terms by tier, state, and school level. The average three-year award was $2.54 million for Tier I and II schools, and $520,000 for Tier III schools. The average three-year award for Tier I and II schools ranged from $620,000 in Vermont to $4.63 million in Illinois. The average three-year award was $2.37 million for high schools and $1.37 million for elementary schools.

Relative SIG award levels. SIG awards varied by state in relative terms. Tier I and II SIG awards in 4 states averaged 6 percent or less of what was spent overall in 2009–10 per pupil. (The average baseline spending among these states ranged from $10,700 to $13,400 per pupil.) In contrast, Tier I and II SIG awards in 11 states averaged 30 percent or more of what was spent overall in 2009–10 per pupil. (The average baseline spending in these states ranged from $6,400 to $23,500 per pupil.)

Source: Hurlburt et al. (2011).

Study Purpose and Conceptual Approach

The purpose of the Study of School Turnaround was to examine how a variety of low-performing schools approached the improvement process during the three years in which they received SIG, and how SIG contributed to this process. In particular, we conducted case studies in a small but diverse sample of Cohort I SIG schools to examine the characteristics of the schools, the decisions and strategies that the schools undertook (and why), and the challenges they faced as they attempted to dramatically improve school performance. The study is based primarily on interviews and surveys, which, by nature, are self-reported. These data were not audited or validated with external sources. SST does not examine the impact of SIG on student achievement outcomes because the case study approach is not well-suited to investigate these questions rigorously, and, because of the limited sample size, it is not designed to

document the practices of all, or even a representative sample of, SIG schools nationwide.[11] This is the final report for this study.[12]

Conceptual Framework

We developed a conceptual framework to help identify and define the main constructs, guide the development of data collection instruments, and focus the analyses of data (see Exhibit 1.2). This framework is based on the SIG program requirements and the research literature on organizational change processes, policy implementation, and effective schools. Prior studies on improving low-performing schools have hypothesized relationships among a range of programmatic and organizational variables on the one hand, and improvements in teaching and learning on the other (Bryk et al., 2010; Herman et al., 2008; McLaughlin & Talbert, 2006). However, it is important to caution that the evidence supporting these relationships is mixed, with some relationships having stronger empirical support than others. Below we highlight how the conceptual framework reflects the study's central assumptions, which are drawn from organizational theory and the literature on school change. A complete review of the evidence base for all of the constructs and hypothesized relationships in the framework is beyond the scope of this report (see Le Floch et al. [2014] for a more complete discussion of the literature that supports our conceptual framework).

Internal Processes and Factors

***Assumption*: Improvement is primarily a process within the school and is primarily affected by internal factors such as the existing practices and reform history in the school, staff definitions of the performance problem, the quality and focus of site leadership, knowledge and skills of instructional staff, and the internal norms governing staff interactions and practice (O'Day, 2002). As is the case in other complex organizations, changes or interventions in one or more areas within a school will influence changes in other areas of organizational functioning (Axelrod & Cohen, 1999).**

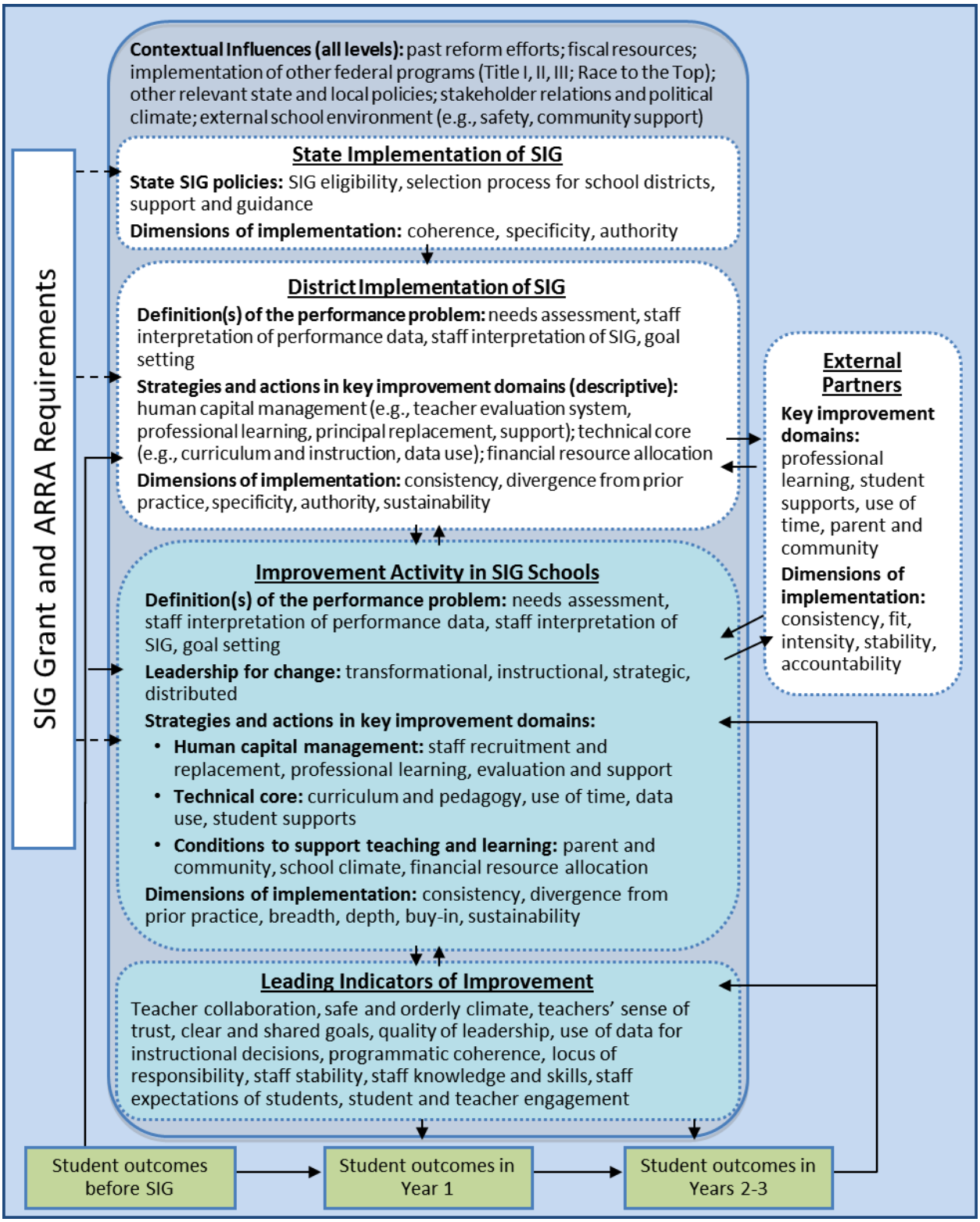
The box labeled *Improvement Activity in SIG Schools* (see Exhibit 1.2) reflects the centrality of the school and the factors within the school that are hypothesized to shape the improvement process. Within this box are aspects of the change process in these schools.

First is the definition of the performance problem. Some researchers have posited that individual and collective definitions of the performance problem, implicit and explicit theories of causality and change, and interpretations of strategies and their apparent results can shape the improvement strategies and actions of the school actors, as well as those of the school district and support providers (Spillane, Reiser, & Gomez, 2006).

[11] IES is conducting an evaluation of SIG (Implementation and Impact Evaluation of Race to the Top and School Improvement Grants) to examine the impact of SIG on school and student outcomes using a larger sample of schools and methods more appropriate for estimating impacts and how they are correlated with various broader measures of implementation. These findings are anticipated by the end of 2016.

[12] See Boyle et al. (2014), Golden et al. (2014), Le Floch et al. (2014), and Rosenberg et al. (2014) for additional findings from this study.

Exhibit 1.2.
Conceptual Framework



Second is leadership for change. Principal leadership reflects a complex set of skills such as communicating a vision, knowledge of content and pedagogical techniques, ability to build a committed staff, and knowledge of how to use data for decision making. These skills appear to be associated with rapid school improvement, as indicated by case study research (Herman et al., 2008; Usdan, McCloud, & Podmostko, 2000). SIG emphasizes the importance of principal leadership by requiring that schools implementing the turnaround or transformation models replace any principals who have been in their positions for more than two years prior to receiving SIG.

Third are the specific improvement strategies and actions that schools can adopt. Based on SIG guidance and the literature on school improvement, our framework focuses on strategies and actions related to the following three areas:

- **Human capital.** The important role of teacher quality in student learning is well documented, as theory and correlational research have related school success to staff capacity.[13] Staff replacement, professional learning, and performance management systems aim to improve staff knowledge and skills, and are common approaches to building human capital in low-performing schools. SIG schools implementing the turnaround model are required to not only replace the principal but also at least 50 percent of their teachers. SIG schools implementing the transformation model are required to adopt teacher evaluation systems that take student achievement into account, in addition to replacing the principal.
- **Technical core of instruction (what and how students learn).** At the heart of most analyses of school improvement is the assumption that what occurs in the classroom helps determine what students learn. SIG requires schools implementing the turnaround and transformation models to adopt "significant instructional reforms" and to increase learning time for students (U.S. Department of Education, 2010). Researchers have studied the effects on student outcomes of increasing learning time, and numerous possible changes in curriculum and pedagogy or in the academic and nonacademic supports for students. (The What Works Clearinghouse provides examples of specific mathematics, science, and literacy curricula that have evidence of being able to produce achievement gains; for research on learning time, see Mass [2020], *Time and Learning, a Brief Review of the Research*; for research on nonacademic supports, see Osher & Kendziora [2010] and Osher et al. [2014].)
- **School conditions that support teaching and learning.** Improving school climate, engaging parents and community members, or allocating increased resources all have been hypothesized to be related to student outcomes. Low-performing schools often tackle conditions such as school climate and parent or community support prior to making changes in the technical core of instruction (Bryk et al., 2010; Herman et al., 2008).

External Influences on School Change

***Assumption*: Change in schools is also influenced by external factors and conditions. Schools are situated in larger complex systems—states and districts—whose strategies (as is the case with schools) reflect varying theories of action, including both conceptions of the underlying problems and assumptions about how the chosen strategies will address those problems (Argyris & Schön, 1974; City et al., 2009; O'Day & Bitter, 2003; Smith & O'Day, 1991; Weiss, 1995).**

[13] See Raudenbush (2014) for an analysis of recent studies: http://www.carnegieknowledgenetwork.org/briefs/long-term-impacts.

The white boxes in Exhibit 1.2 highlight the influence of other system actors—states, districts, and external providers—on what happens in a school. As a federal program, SIG funds flow through states to districts and ultimately to schools. States and districts make decisions that determine which schools receive SIG, how much funding they receive, and which models they will adopt. The SIG guidelines also encourage funded schools to partner in some capacity with an external support provider, such as educational management organizations, charter management organizations, outside vendors, and nonprofit organizations, with the hope that these partners will positively influence the implementation of improvement strategies.

The gray area surrounding the boxes in Exhibit 1.2 represents the contextual conditions that can influence SIG implementation at all levels. The actions that SIG schools take may be related to non-SIG policies and programs at the federal, state, and local levels; the political and fiscal climate; and the demographics and needs of the communities and families served. For example, SIG is targeted to low-performing schools, many of which are located in low-income neighborhoods. The relationship between neighborhood poverty and student outcomes is well documented (Duncan & Raudenbush, 1999; Pebley & Sastry, 2004). Neighborhood characteristics such as economic and social flux, high resident turnover, and a large proportion of single-parent families—as well as neighborhoods where crime and drugs are present—all represent risk factors for youth development (Hann & Borek, 2001) and can be reflected in unsafe schools (Neiman & DeVoe, 2009).

Dimensions of Implementation

***Assumption*: Improvement actions comprise both *what* is done and *how* (or how well) it is done. Adoption of improvement activities or strategies is not enough. Their success in changing practice depends on the quality of implementation. Implementation and change are influenced by the individual and collective beliefs, motivation, and knowledge/skills of school personnel (McLaughlin, 2005; Spillane, Reiser, & Reimer, 2002).**

Reflecting the role of implementation in school improvement, the box in the conceptual framework labeled *Improvement Activity in SIG Schools* includes both descriptive characteristics of the change strategies (i.e., actions that schools undertake to improve human capital, technical core, or conditions that support teaching and learning) and analytic dimensions associated with their implementation (i.e., features of these change strategies, such as their consistency with one another or how they diverge from prior practice. Dimensions of implementation also appear in the white boxes related to state and district implementation of SIG and the actions of external partners.

Correlational studies and case study research indicate that the level and quality of implementation are associated with the prospects for school turnaround (Newmann & Associates, 1996; Newmann et al., 2001) and have identified several variables that relate to the implementation of successful improvement efforts. These variables include the divergence from prior practice (Herman et al., 2008; Rhim et al., 2007), and teacher "buy-in" (Bailey, 2000; Bodilly, Purnell, Ramsey, & Keith, 1996; Datnow, 2000). Researchers have proposed varying hypotheses regarding how some of these implementation variables influence school change. For example, divergence from prior practice may make implementation of a reform more difficult because the reform may conflict with entrenched patterns of behavior; on the other hand, efforts that diverge from prior practice may have the best prospects for "shaking up" entrenched routines and expectations (see Rhim et al., 2007; Waters, Marzano, & McNulty, 2003).

In both theoretical and empirical studies, researchers have described the complexity of implementing school improvement efforts. Implementation takes shape as policies and practices are interpreted and acted on across multiple levels of the education system, across individuals within these levels, and over

time as conditions change and as individuals and organizations interpret the results and modify practices (Honig, 2006; McLaughlin, 1987; Spillane, Reiser, & Reimer, 2002).

Leading Indicators and Organizational Capacity

***Assumption*: While the ultimate goal of the improvement process is to increase student achievement, many improvement actions that schools take are designed to operate on less direct influences on student learning, such as teacher knowledge and skills, principal leadership, or school climate. Taken together, these indirect influences are often referred to as schools' organizational capacity for high performance and improvement. Studies of low-performing schools have often noted their general lack of organizational capacity (Mintrop & Trujillo, 2005; O'Day, Goertz, & Floden, 1995) and cite low capacity as an important contributor to persistent low achievement. By contrast, studies of low-performing schools that perform better than expected demonstrate a correlation between these same characteristics and consistently higher performance (Hallinger & Heck, 2010; Harris, 2002). Although these studies have been mainly correlational in nature, they suggest that indicators of school capacity are both malleable and potentially predictive of subsequent improvements in student outcomes. Capacity is therefore both a target of improvement activity and a leading indicator of improvement.**

The box in the conceptual model labeled *Leading Indicators of Improvement* lists aspects of a school's capacity that researchers hypothesize set the school-level conditions that could foreshadow student learning outcomes. For example, staff knowledge and skills is an indicator of the human capital aspect of capacity. Researchers have documented the relationships between the knowledge, skills, dispositions of teachers and leaders—human capital—and student outcomes (Cohen & Ball, 1999; Rockoff, 2004), and approaches to improving low-performing schools have tended to focus on building human capital (Massell, 2000; McLaughlin & Talbert, 2006).

Exhibit 1.3 describes the subset of capacity indicators that we were able to measure in this study, and specifies some of the literature that supports their hypothesized relationships to student outcomes. As is clear from the literature, human capital alone does not constitute school capacity. Mutual understanding and norms that grow out of relationships among individuals in the school; coherent instructional frameworks that are incorporated into practice; and proper use of resources, which can include curriculum materials or instructional time, all are aspects of the school's capacity as an organization (Beaver & Weinbaum, 2012; Bryk et al., 2010)). Organizational capacity also includes vision and leadership, access to knowledge, and organizational structures and management (King & Bouchard, 2011; O'Day, Goertz, & Floden, 1995).

Exhibit 1.3.
Leading Indicators of Organizational Capacity

Leading Indicator	Definition	Supporting Literature*
Teacher Collaboration	Teacher collaboration is characterized by mutual assistance and support within the school context (O'Day, Goertz, & Floden, 1995). Often described in the literature as either same-subject teachers "identifying a common curriculum, developing common assessments aligned to that curriculum, and then analyzing common assessment data to make instructional changes" (DuFour, 2004b, p. 3) or as teachers of the same students but of different subjects working together (Erb & Doda, 1989; Rottier, 2001).	Some studies have found a positive correlation between teacher collaboration and student achievement (Goddard, Goddard, & Tschannen-Moran, 2007; Vescio, Ross, & Adams, 2008). Teacher collaboration and cooperation facilitate improved teacher morale and motivation through the sharing of ideas and practices (Corcoran & Goertz, 1995). This mutual assistance and support, or the "receptivity" of colleagues, plays a role in teachers' daily practice (O'Day, Goertz, & Floden, 1995).
Safe and Orderly Climate	A safe and orderly climate is an environment in which students "have a sense of being physically and psychologically safe in their school. There are few disruptions due to disciplinary problems, and those that occur are handled firmly and fairly" (Consortium on Chicago School Research, 2004, Student-Centered Learning Climate section).	A safe school environment characterizes schools that have beaten the odds (Bryk et al., 2010; Herman et al., 2008; Johnson & Asera, 1999; U.S. Department of Education, 2010). "Prevailing research suggests that students' feelings of safety at school, and problems with peer relationships and bullying, are influenced by a broad array of factors, including students' own attributes, attributes of their schools, adults with whom students interact, families, neighborhoods, and the broader society" (Steinberg, Allensworth, & Johnson, 2011, p. 8).
Teachers' Sense of Trust	Teachers' sense of trust is referred to as the extent to which teachers feel they have mutual respect for each other, for those who lead school improvement efforts, and for those who are experts at their craft (Consortium on Chicago School Research, 2004).	Based on correlational analyses of survey data, Sebring and Bryk (2000) found that "in schools that are improving, where trust and cooperative adult efforts are strong, students report that they feel safe, sense that teachers care about them, and experience greater academic challenge. In contrast, in schools with flat or declining test scores, teachers are more likely to state that they do not trust one another" (p. 5).
Clear and Shared Goals	Schools in which goals are clear and shared among staff are characterized by a unity of purpose, explicit expectations, and shared values for student learning and success (Newmann et al., 2001; Purkey & Smith, 1983).	Studies of schools with higher-than-expected achievement found that establishment of a clearly defined purpose enables a school to "direct its resources and shape its functioning toward the realization of those goals" (Purkey & Smith, 1983, p. 445) and helps to reduce student alienation (Newmann, 1981). Research about organizations other than schools has found that shared values among colleagues is related to one's personal sense of investment in the organization and facilitates cooperation in the workplace (Cable & DeRue, 2002; Watrous, Huffman, & Pritchard, 2006).
Quality of Leadership	A school principal demonstrating quality leadership in an improving school is "more likely to be an instructional leader, more assertive in his/her institutional leadership role, more of a disciplinarian, and…assumes responsibility for the evaluation of the achievement of basic objectives" (Edmonds, 1979, p. 18). For the purposes of the analyses in this report, three dimensions of leadership are addressed: transformational leadership, instructional leadership, and strategic leadership.	Case studies of successful turnaround schools consistently point to the role of the principal in turnaround efforts (Edmonds, 1979; Herman et al., 2008; Purkey & Smith, 1983). One meta-analysis of 70 studies of principal leadership found a positive correlation between principal leadership (as measured by teacher perceptions) and student achievement (Waters, Marzano, & McNulty, 2003).

Exhibit 1.3.
Leading Indicators of Organizational Capacity ***(continued from previous page)***

Leading Indicator	Definition	Supporting Literature*
Use of Data for Instructional Decisions	The use of data for instructional decisions is characterized as the monitoring of student learning and frequent and transparent use of student outcome data to guide instructional decisions (Coburn & Beuschel, 2012; Coburn & Turner, 2011a; Coburn & Turner, 2011b).	Using data to modify curricular and teaching strategies is a common feature of turnaround schools (Herman et al., 2008). Some studies have found that data can help teachers fine-tune their practices and catch learning problems before they become intractable, in some cases diminishing referrals to special education programs (Marston et al., 2003; McNamara, 1998; Reschly & Starkweather, 1997; Sornson, Frost, & Burns, 2005).
Programmatic Coherence	Programmatic coherence is measured by the degree to which the policies of a school reflect consistent goals, the strategies employed are clearly designed to foster achievement of these goals, and barriers and detractors from the goals and strategies are systematically removed (Honig & Hatch, 2004; Newmann et al., 2001).	Correlational and case studies of schools implementing whole-school reforms found that school staff have difficulty implementing multiple, unrelated interventions (Berends, 2000; Berends, Bodilly, & Kirby, 2002) and that isolated interventions that are not aligned with other school or district objectives are less likely to achieve desired outcomes than interventions that are closely aligned with existing improvement efforts (Datnow et al., 2006).
Locus of Responsibility	Locus of responsibility is characterized by the way in which school respondents attributed the performance problem in their school to factors within their control (i.e., internal causes) or outside their control (i.e., external causes).	Reviews of research have found that schools in which teachers exhibit high levels of collective efficacy and take ownership for the challenges facing their schools are more likely to improve student outcomes (Bandura, 1993; Goddard, 2001; Goddard, Hoy, & Hoy, 2000; Goddard, Hoy, & Hoy, 2004).

*The literature referenced in this exhibit includes conceptual as well as empirical work (mainly correlational and case study research). The exhibit is not a full review of the research about the leading indicators included in our conceptual framework. As with the conceptual framework as a whole, the leading indicators reflect the variables that researchers and educators hypothesize are related to student outcomes, rather than variables that have been conclusively determined to be causally related to student outcomes.

To sum up, our conceptual framework depicts schools as complex social systems in flux that have a variety of internal stakeholders and prior histories of reform. The characteristics of schools and the various improvement strategies they employ interact and overlap. Schools also are situated in a variety of district, state, and community contexts. Implementation of any program, such as SIG, depends on how school-level actors interpret the performance problems of their schools, the approaches they take to address these problems, and conditions schools face. Increasing the school's capacity—both human and organizational—to improve student outcomes in the face of such complexity is thought to be a particularly difficult challenge facing many low-performing schools (Beaver & Weinbaum, 2012).

Report Overview

This report focuses on a small sample of SIG schools over the three years of the program, from 2010–11 to 2012–13. It presents findings from the study's 25 core sample schools, which were the focus of data collection in spring 2011 and spring 2012, and a subsample of 12 of the 25 schools (collectively referred to as the core subsample), which were selected for data collection in spring 2013 and are the focus of analyses looking across the three years of SIG.

The findings in this report build upon the SST Year 1 report (Le Floch et al., 2014), which looked at the change process in the 25 core sample schools through the first year of SIG implementation (2010–11). Box 1.2 describes the key findings from the Year 1 report.

The Year 1 data pointed to the diversity among the SIG schools in terms of neighborhood context, fiscal context, and principal leadership, as well as in the ways in which respondents defined the performance problem. In addition, the core sample schools engaged in a wide range of improvement actions and uses of SIG funds—not all schools had a large infusion of funds, and the SIG models did not necessarily dictate what actions the schools initiated. Given these variations, it is not surprising that at the end of the first year of SIG implementation, some schools appeared to be better positioned to improve student outcomes.

Box 1.2. Key Findings From the Year 1 Report

- **Context and the Performance Problems in SIG Schools.** Although all were low-performing, core sample schools differed in their community and fiscal contexts, their performance and reform histories, and their interpretations of the causes of—and potential solutions for—their performance problems.
- **Leadership for Change**. Approaches to leadership varied across the set of core sample schools with most principals exhibiting a mix of leadership qualities. The most frequently reported leadership approach among the core sample schools was transformational leadership, referring to principals who can develop leaders and motivate and engage their staff behind a strong organizational vision. Although respondents in the majority of schools reported some improvement in 2010–11, schools in which respondents described the improvements in the greatest number of areas also had higher levels of principal strategic leadership (referring to principals who are able to formulate a strategy for school improvement and translate that strategy into concrete priorities and specific actions) and were more likely to have experienced a disruption from past practices.
- **Improvement Actions in SIG Core Sample Schools.** For most of the core sample schools, respondents did not perceive SIG as the primary impetus for the change strategies that had been adopted. In 19 of these schools, the improvement strategies and actions implemented during the first year of the grant (2010–11) were reportedly a continuation of activities or plans that predated SIG.
- **SIG and the Change Process.** At the time of data collection, 7 of the 25 core sample schools had experienced a visible disruption from past practice; the remaining schools appeared to be following a more incremental approach to improvement.
- **Leading Indicators of Change.** Overall, core sample schools with the lowest levels of organizational capacity in 2010–11 were those in which teachers reported having fewer resources, the SIG award represented a larger percentage of the prior year's per-pupil expenditures, and respondents perceived the SIG award as a catalyst for change.

Source: Le Floch et al. (2014).

The Year 1 findings provided a baseline for exploring the change process in subsequent years. With data collected over the succeeding two years of SIG (2011–12 and 2012–13), we sought to document: (1) the schools' efforts to build human capital to address their challenges (the focus of data collection in Year 2)

and (2) the extent to which these efforts to build human capital yielded changes in organizational capacities to improve student learning, and the perceived sustainability of these improvement efforts (the focus of data collection in Year 3). This report, which is based on data from all three years of the study, is organized into three parts:

Part I: Setting the Stage (Chapters 1–2). Chapter 1 introduces the SIG program and the study's conceptual framework. Chapter 2 describes the study design, timeline, sampling procedures, and data collection and analytic approaches.

Part II: Building Human Capital (Chapters 3–7). The knowledge and skills of the school leadership and instructional staff provide the foundation and expected focus for much of the improvement efforts in SIG schools. The second part of this report examines the strategies that the 25 core sample schools employed to build their human capital. We focus on two general approaches or leverage points for improving the knowledge and skills of school staff: (1) change the composition of the school staff through replacement, recruitment, and retention strategies; and (2) change the capabilities and strategies of the existing staff through professional learning. We consider both the internal strategies in these two areas and the relevant influences and supports from external providers and school districts.

Part III: Change and Sustainability (Chapters 8–9). SIG is intended to support rapid and dramatic improvement in the nation's persistently lowest-achieving schools. The chapters in the final section of this report focus on 12 of the 25 core sample schools (collectively referred to as the core subsample), examining school personnel's perceptions of improvement and changes in school capacity at the end of the three years of SIG, the role of SIG in those changes, and the perceived sustainability of the schools' improvement efforts at the conclusion of the grant.

Because the SST was an exploratory study, the aim was to examine and generate hypotheses that might be explored in future research. Thus, the report ends with hypotheses and questions, setting the stage for future work to better understand the improvement process in the nation's persistently lowest-achieving schools.

Chapter 2: Study Design

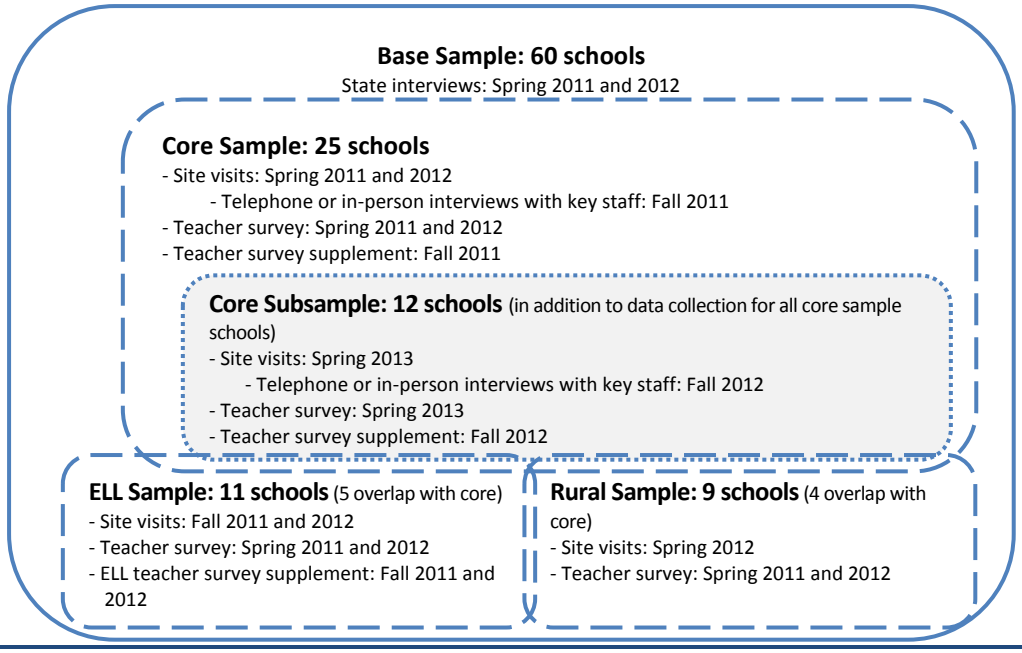
This chapter summarizes the study's design, including how we selected our sample of case study schools, when and what data we collected from these schools, and how we analyzed the data.

We initially selected a **base sample** of 60 schools from the set of schools awarded SIG in the summer of 2010 (Cohort I), which we then used to select various smaller samples for different parts of the study. The **core sample** consisted of 25 schools, which we visited during the 2010–11 and 2011–12 school years. For the 2012–13 school year, we selected a **core subsample** of 12 schools to visit from the 25 core sample schools. Thus, we followed 13 of the 25 core sample schools for two years (2010–11 and 2011–12) and the remaining 12 core sample schools for three years (2010–11 through 2012–13). These 25 schools were subject to the most intensive data collection in this study, including interviews and focus groups with a range of respondents and teacher surveys.

In addition, we selected two special topic samples from the base sample to more closely examine schools with large English language learner (ELL) populations and schools in rural settings: the **ELL sample** included 11 schools with a high concentration of ELLs, and the **rural sample** included 9 rural schools. We conducted site visits at the ELL sample schools during fall 2011 and 2012, and at the rural sample schools during spring 2012. There was some overlap among the various samples. For example, of the 11 schools in the ELL sample, 5 were also in the core sample. Of the 9 schools in the rural sample, 4 were also in the core sample. One school was in both the rural and ELL samples, while one school was in the core, ELL, and rural samples.

Exhibit 2.1 summarizes the various study samples and associated data collection activities and timelines. The rest of this chapter and report focuses on the core sample and core subsample schools. For more details on the ELL and rural samples, see the special topic evaluation briefs (Boyle et al., 2014; Golden et al., 2014; Rosenberg et al., 2014).

Exhibit 2.1.
Study Samples and Data Collection Timeline



Sample Selection

We selected a small, purposive sample of case study schools to support an in-depth examination of SIG schools in a variety of contexts. Although our sample is not designed to be nationally representative of all SIG schools due to the limited sample size, we did intend for the schools in our sample to vary on observable state, district, and school characteristics that might be associated with implementation patterns. At the school level, the following factors were taken into account in selecting the sample:

- **Tier I and Tier II schools.** This study focused exclusively on Tier I and Tier II SIG schools because they were the only schools required to implement one of the four SIG intervention models (U.S. Department of Education, 2011).
- **SIG intervention model.** Our sample did not include closure schools because these schools would not have been available for longitudinal study. Because the restart model was adopted for only 33 (4 percent) of the Tier I and II SIG schools from Cohort I (Hurlburt, Therriault, & Le Floch, 2012), we oversampled restart schools to ensure that at least a few of them were included in our sample. Otherwise, our sample was selected to approximately reflect the national distribution of SIG intervention models.
- **Grade level.** At the recommendation of our Technical Working Group, we included only high schools and elementary schools in our sample to keep the dimensions of variation in the sample more manageable. These two levels merited inclusion for several reasons. Elementary schools were selected, in part, because of the large number of low-performing elementary schools. For example, 55 percent of SIG-eligible schools in the first cohort were elementary schools, whereas 20 percent were middle schools (Hurlburt et al., 2011). High schools were selected, in part, because of the challenges faced by students and staff. For example, high schools are frequently organized into academic departments, serve students with a diverse set of postsecondary goals, and are populated by adolescents who often face adult responsibilities (Carnoy, Elmore, & Siskin, 2003; Harvey & Housman, 2004; Le Floch et al., 2010). High schools also are widely perceived to be the most resistant to improvement strategies (and thus merit further inquiry) and are the focus of current policy interest, as a convergence of efforts on the part of private foundations, researchers, and advocacy groups has focused attention on high schools (Hess, 2005; Hill, 2006; Yohalem et al., 2006). Middle schools face their own unique set of issues that deserve attention, particularly in relation to student behavior. However, given our limited sample size and the desire to be able to go sufficiently in-depth within each grade span, we felt that their exclusion from the study was an acceptable tradeoff. Our findings are thus not necessarily relevant to any low-performing middle schools and should not be used to make such generalizations.

Additional school-level variables considered included school size, school urbanicity, demographics of enrolled students (i.e., percentage eligible for free or reduced-price lunch, percentage minority, and percentage ELL), and the size of the SIG award as a percentage of overall annual per-pupil spending.[14]

[14] The percentage for each school was computed as the SIG school's annual SIG per-pupil award as a percentage of the per-pupil spending on instruction, support services (student support services, instructional staff, and school administration), and operation and maintenance for the year prior to the SIG award, for the district in which the school is located. This district measure is a proxy for per-pupil school-level spending (2009–10 base per-pupil spending figures from the *Common Core of Data* [http://nces.ed.gov/ccd/] are Consumer Price Index–adjusted to 2011 dollars).

At the state level, we sought variation on the following variables:

- Union policies (i.e., right-to-work versus unionized)
- Level of base per-pupil spending on education (based on the year prior to SIG)
- Level of SIG funding per school
- Region

Finally, we sought to select districts with multiple SIG schools—in part to facilitate analyses of the district role in the improvement process and in part for practical reasons (to limit data collection costs).

Base sample. The base sample served as the pool from which we selected all other samples for the study. Using a two-step sampling approach, we selected 60 schools—30 elementary and 30 high schools in 24 districts and 6 states—from the set of Cohort I SIG schools in 49 states and the District of Columbia.[15] We started by selecting 6 states from which the 60 base sample schools would be identified. In selecting these states, we sought variation in the key state-level dimensions. In addition, states were required to have (1) at least five SIG schools meeting the school-level criteria (i.e., Tier I or Tier II; elementary or high school; and implementing the turnaround, restart, or transformation model); and (2) at least one district with three or more SIG schools meeting the school-level criteria. We then selected the final base sample of SIG schools from the six selected states using an iterative process aimed at balancing urbanicity, SIG models, annual per-pupil funding, school size, and student demographics, while limiting (for cost reasons) the total number of districts represented in the sample.

Core sample. From the 60 base sample schools, we selected 25 for the core sample, which was the focus of in-depth data collection in SIG Years 1 and 2. We sought to achieve a balance of intervention models, school levels, and nesting of case study schools within districts. We also sought to represent all six states and urbanicity categories from the base sample. Finally, we aimed to include schools with a range of SIG award sizes relative to overall annual per-pupil spending. The set of 25 schools included the following:

- 13 elementary schools and 12 high schools in 13 districts
- 16 urban schools, 5 urban fringe schools, and 4 rural schools
- 13 transformation schools, 9 turnaround schools, and 3 restart schools

Core subsample. From the 25 core sample schools, we selected 12 for the core subsample, which was the focus of data collection in SIG Year 3. The sample size was reduced to better target limited project resources on more in-depth analyses in a smaller set of schools. In choosing the 12 schools, we sought to maintain a balance of intervention models and school levels while also seeking variation in the following measures from our Year 1 data analyses that are hypothesized to be related to the improvement process (see Le Floch et al. [2014] for more discussion of these Year 1 measures):

- **Perceived external context.** Analysis of Year 1 data revealed that core sample schools were situated in a range of community contexts, from "traumatic" environments characterized by reports of high crime, incarceration, abuse, and severe urban poverty to comparatively "benign" environments characterized by limited reports of crime, homes in good repair, and few reports of family instability.
- **Disruptions from the past.** SIG was designed to spur dramatic and visible changes; however, Year 1 data suggested that core sample schools differed in the extent to which SIG coincided with a visible disruption of existing school norms and practices. Retrospective case studies

[15] At the time we selected the sample (March 2011), Hawaii had not released the list of their SIG schools.

suggest that low-performing schools that have improved their performance appreciably over a short time frame made dramatic changes from the status quo by signaling the urgent need for change, making visible improvements right away ("quick wins"), sharply focusing on instruction, and building a committed staff—often through releasing, replacing, or redeploying school personnel (Bryk et al., 2010; Herman et al., 2008). Interpreting these findings, turnaround advocates and researchers argue that to effectively address long-standing, intransigent patterns of low performance requires a dynamic, intensive, sustained change process that starts with a visible disruption of past practices (Hassel & Hassel, 2009).

- **Perceived role of SIG in the change process.** Analysis of Year 1 data suggested that SIG's role in the change process was perceived by core sample schools to take one of two forms: as the primary impetus of change or as an effort that fit into an ongoing change process. For a third group of core sample schools, changes were described by respondents as "marginal" or "tweaks," indicating that, although the schools had made purchases with SIG funding, they had not launched a reform process. Case study research has documented how schools' contexts and experience with prior improvement efforts can influence how new initiatives are perceived and implemented (Scott, 2009). Based on this research literature, we hypothesized that the contribution of SIG is likely to be perceived differently in schools, depending on their context and history.
- **Perceived improvement in Year 1 of SIG implementation.** Analysis of Year 1 data revealed that core sample schools varied in the extent to which respondents perceived that their schools were making progress after the first year of SIG implementation. The perceptions themselves, even if not necessarily supported by more objective measures of change (i.e., student test results, graduation rates, or other measures of student outcomes), could influence how the participants subsequently related to and participated in the improvement process.
- **Organizational capacity in Year 1 of SIG implementation.** Analysis of Year 1 data suggested that core sample schools differed in their level of organizational capacity, as defined by evidence of the following eight intermediate outcomes hypothesized to be associated with higher levels of student achievement: teacher collaboration, safe and orderly climate, teachers' sense of trust, clear and shared goals, quality of leadership, use of data for instructional decisions, programmatic coherence, and locus of responsibility. In the context of a school improvement initiative, increases in these indicators may be viewed as signs of increased organizational capacity and thus as potential precursors to—or leading indicators of—subsequent improvements in student achievement.

In considering these Year 1 measures, we sought to identify a subset of schools that would represent a range of different ways in which the change process may occur, as depicted in the conceptual framework and described in Chapter 1. The set of 12 schools included 5 elementary schools and 7 high schools in 8 districts and 5 states.

Comparing Case Study Schools to SIG-Eligible and SIG-Funded Schools Nationwide

Although our case study schools were not intended to be nationally representative, we sought to ensure that the core sample and core subsample shared some similarities with SIG-funded schools nationwide on observable characteristics. Compared to the population of SIG-funded Tier I and II schools, both the core sample and core subsample schools were more likely to be larger and high minority, with core sample schools also more likely to be urban (see Exhibit 2.2). The samples were more comparable to

SIG-funded schools on other variables. (Because of the similarities between SIG-eligible Tier I and II schools and SIG-funded Tier I and II schools, core sample and core subsample schools were similarly comparable to the overall population of SIG-eligible Tier I and II schools.) Some purposeful distinctions existed between the core sample and SIG-funded schools nationwide. Most notably, our sample included only elementary and high schools. With regard to SIG intervention models, the core sample and core subsample featured more turnaround and restart schools and fewer transformation schools as compared with SIG-funded Tier I and II schools. As previously discussed, closure schools were excluded from our samples. In addition, although SIG schools nationwide included alternative, special education, and vocational schools, the core and core subsample schools purposively included regular schools only.

Exhibit 2.2.
Characteristics of Cohort I SIG-Eligible Tier I and II Schools, SIG-Funded Tier I and II Schools, Core Sample Schools, and Core Subsample Schools

	SIG-Eligible Tier I and Tier II Schools (*N* = 2,141)	SIG-Funded Tier I and Tier II Schools (*N* = 826)	Core Sample Schools (*N* = 25)	Core Subsample Schools (*N* = 12)
School Level (percentage of schools)				
Elementary	21%	24%	52%	42%
Middle	17%	20%	0%	0%
High	51%	49%	48%	58%
Nonstandard	11%	7%	0%	0%
School Type (percentage of schools)				
Regular	86%	91%	100%	100%
Alternative	11%	7%	0%	0%
Special education	2%	1%	0%	0%
Vocational	1%	1%	0%	0%
Urbanicity (percentage of schools)				
Large or middle-sized city	54%	59%	68%	58%
Urban fringe and large town	26%	23%	16%	25%
Small town and rural area	20%	18%	16%	17%
Free and Reduced-Price Lunch (school average percentage of students)[a]	75%	76%	81%	80%
Race/Ethnicity (school average percentage of students)[a]				
White	19%	17%	8%	11%
African American	43%	46%	42%	40%
Hispanic	32%	32%	41%	35%
Native American	2%	2%	4%	8%
Asian	3%	3%	4%	5%
Total School Enrollment (school average)	614	676	831	859

Exhibit 2.2.
Characteristics of Cohort I SIG-Eligible Tier I and II Schools, SIG-Funded Tier I and II Schools, Core Sample Schools, and Core Subsample Schools
(continued from previous page)

	SIG-Eligible Tier I and Tier II Schools (*N* = 2,141)	SIG-Funded Tier I and Tier II Schools (*N* = 826)	Core Sample Schools (*N* = 25)	Core Subsample Schools (*N* = 12)
SIG Intervention Model (percentage of schools)				
Transformation		74%	52%	58%
Turnaround		20%	36%	25%
Restart		4%	12%	17%
School closure		2%	0%	0%

Source: 2009–10 *Common Core of Data*; state websites.
Notes: Includes 2,141 Cohort I SIG-eligible Tier I and II schools and 826 Cohort I SIG-funded Tier I and Tier II schools in 49 states and the District of Columbia; 25 core sample schools in 6 states and 13 districts; and 12 core subsample schools in 5 states and 8 districts.
Percentage values for characteristics with multiple categories may not sum to 100 due to rounding.
Nonstandard refers to those schools with a grade configuration not falling within the elementary, middle, or high school categories.
[a] Student characteristics are weighted in proportion to the number of students enrolled in a school.

Data Collection Activities

Key data collection activities for the core sample and core subsample schools included the following:

- **Site visits.** Site visits took place over 1.5 to 2.5 days in each of the 25 core sample schools during spring 2011 and 2012, with an additional visit in each of the 12 core subsample schools during spring 2013. We conducted interviews or focus groups with the principal, teachers, support providers, and other respondents, as well as interviews with officials of the district in which the school was located. Semistructured interview protocols guided these interviews and focus groups, and covered specific topics of interest consistently across respondents and years of data collection, allowing respondents to describe school improvement processes and policies in their own words. In addition to topics covered annually, site visits also focused on specific key areas each year, as discussed further below.
    - **Supplemental telephone or in-person interviews with key staff.** To supplement the spring site visits, we conducted shorter data collections, consisting of interviews with district representatives, principals, and instructional coaches, in each of the 25 core sample schools during fall 2011 and in each of the 12 core subsample schools during fall 2012.
- **Teacher survey.** We administered an approximately 10-minute Web-based teacher survey to all teachers in the 25 core sample schools in spring 2011, fall 2011, and spring 2012, and to all teachers in the 12 core subsample schools in fall 2012 and spring 2013. The survey covered selected topics for which we required data representative of all teachers in the school.
- **Interviews with state officials.** Interviews conducted in spring 2011 and 2012 with state administrators responsible for overseeing the SIG program in the six sample states provided

insight on state-level decisions with regard to state funding, state contexts (e.g., legal constraints and flexibility), and state actions and technical assistance.

In the remainder of this section, we provide additional details regarding the two primary data collection activities: site visits and teacher surveys. The complete set of data collection instruments for all activities can be found at http://www.air.org/project/study-school-turnaround.

Site visits. Two researchers from the study team visited each school, with the lead site visitor responsible for conducting the interviews and the second site visitor responsible for taking notes. During some visits, the second site visitor conducted some of the interviews or focus groups, depending on the second visitor's experience. With the permission of interviewees, conversations also were audio-recorded.

The study team aimed to interview the following respondents for each core sample and core subsample school, if applicable, during the spring site visits: the superintendent or district SIG director, the principal, one to two instructional coaches (e.g., mathematics and English), four teachers (two mathematics and two English teachers in the high schools), an external support provider (e.g., curriculum/instructional providers, school turnaround organizations, and charter management organizations), and a union representative. Site visitors also conducted focus groups with the following groups: the School Improvement Team, parents and community members, two groups of teachers (core and noncore subjects in high schools), and students (in high schools only). As previously noted, fall data collections were limited to interviews with a district representative, the principal, and one or two instructional coaches. To ensure a variety of perspectives on the schools' history and current change strategy, school personnel (generally, the principal or other school administrator) were asked to select teacher respondents with different levels of teaching experience, grade-level assignments, and subject areas taught (in the case of high schools). Respondent groups, such as parents/community members and high school students, were likewise selected by school personnel with instructions to include as diverse a group as was feasible.

Exhibit 2.3 summarizes the number of respondents for each wave of site visits. For site visits to the 25 core sample schools, the spring 2011 wave included 653 respondents; the fall 2011 wave, 106 respondents; and the spring 2012 wave, 647 respondents. For site visits to the 12 core subsample schools, the fall 2012 wave included 44 respondents; and the spring 2013 wave, 267 respondents. Of the principals interviewed in each year, 44 percent were new to the school in 2010–11, 32 percent were new in 2011–12, and 17 percent were new in 2012–13. Among teachers interviewed in each year, 18 percent were new in 2010–11, 2 percent were new in 2011–12, and 7 percent were new in 2012–13.

Site visitors followed semistructured interview protocols that outlined key questions to ask of interviewees and provided follow-up probes. To build rapport with respondents, the interview structure also allowed for conversation and discussion. Site visitors remained flexible to follow up on themes that emerged during interviews that warranted more attention. Site visitors attempted to balance obtaining information from interviewees on the topics on which they were most knowledgeable while obtaining the perspectives of all respondents on key issues.

Exhibit 2.3.
Number of Site Visit Respondents for Core Sample and Core Subsample Schools, 2011–2013

	Core Sample (*n* = 25 schools in 13 districts)			Core Subsample (*n* = 12 schools in 8 districts)	
Respondent Group	**Spring 2011**	**Fall 2011**	**Spring 2012**	**Fall 2013**	**Spring 2013**
Superintendent	3	0	2	0	0
District SIG directors	7	8	10	3	7
Other district staff[a]	18	9	24	0	11
Principals	27 (12)[d]	25 (8)	25 (8)	11 (2)[e]	12 (2)
Teachers	323 (58)	-	271 (5)	-	107 (7)
Instructional coaches	37	37	42	15	16
Other school staff[b]	22	13	91	2	32
External support providers[c]	18	14	20	7	7
Union representatives	23	-	11	-	0
Parents	103	-	86	-	34
Students	72	-	65	-	41
Total	**653**	**106**	**647**	**44**	**267**

Source: SST teacher survey, spring and fall 2011, spring and fall 2012, and spring 2013.
Notes: Includes 25 core sample schools for spring 2011, fall 2011, and spring 2012; and 12 core subsample schools for fall 2012 and spring 2013. The numbers of principals and teachers new to the school in the year in which they were interviewed are provided in parentheses.
[a] Other district staff include assistant superintendents, school turnaround specialists, and curriculum/instructional support personnel.
[b] Other school staff include school administrators, parent/community relations liaisons, and support personnel.
[c] External support providers include curriculum/instructional providers, school turnaround organizations, and charter management organizations.
[d] One school in the core sample is divided into four academies, each with its own principal. Three of these principals were interviewed, hence a total of 27 principals in the core sample for spring 2011.
[e] The principal at one school in the core subsample was not interviewed in fall 2013.

All interviews and focus groups adhered to the following topics, which were consistently addressed across all respondent groups and years of data collection:

- Respondent's background
- Respondent's role and responsibilities in the school
- School context (demographics, strengths, challenges)
- Key improvement activities in place or planned at the school
- Perceptions of SIG and the change process

In addition to these topics, each year of data collection also featured different areas of focus, informed by the stage of SIG implementation and findings from the preceding year of data collection. Site visits during Year 1 (spring 2011) focused on gathering contextual background information, including the school's reform history, the rationale behind SIG implementation in each of the 25 core sample schools, and initial improvement activities. Year 2 site visits (fall 2011 and spring 2012) focused on school leadership and organizational capacity-building activities, which may be particularly important for sustaining improvements beyond the short-term infusion of SIG funds. Year 3 site visits (fall 2012 and spring 2013) to the 12 core subsample schools captured respondents' reflections on the change process, both over the three years of SIG and during the most recent school year (2012–13). These data provide information on the trajectory and pace of the change process in these schools, as well as the potential sustainability of improvements after the end of SIG.

Teacher survey. To supplement the qualitative data, we administered surveys to all teachers in the 25 core sample schools during the spring of the first data collection year (2010–11) and during the fall and spring of the second data collection year (2011–12); teachers in the 12 core subsample schools also responded to surveys in the fall and spring of the third data collection year (2012–13).[16] All spring surveys included items on the following areas: shared goals, shared values, instructional leadership, program coherence, teacher-teacher trust, principal-teacher trust, school resources, and student behavioral issues. Additional questions were included in the spring surveys for Years 2 and 3 to gather information about topics we wanted to explore further, including school improvement planning (added in Year 2), professional learning (included in Year 2 only), and perceptions of school change and perceptions on sustainability (added in Year 3). Items collected but not used in the Year 1 analyses, such as those related to school commitment and self-efficacy, were removed after the spring 2011 survey. The Year 2 fall survey focused on professional learning, and the Year 3 fall survey focused on school improvement planning and student engagement. When initially designing the teacher survey, we borrowed items developed for other studies, which demonstrated that they could be used to create reliable scales. Most scales were from teacher surveys developed by the Chicago Consortium on School Research (CCSR), but others were developed by staff from the American Institutes for Research for other national studies of school reform.[17] Subsequent items added to the teacher survey were created for the purposes of this study.

Exhibit 2.4 presents the teacher response rates and distribution of response rates across schools for each survey administration. Because the teacher survey was designed to characterize broader teacher perceptions of activities and conditions in each school, schools with low response rates were excluded from survey analyses. Based on a series of exploratory analyses, we excluded survey results for schools with less than a 50 percent response rate (for more information, see Le Floch et al. [2014]). Year 1 survey analyses included 21 core sample schools, and Year 2 survey analyses included 23 core sample schools. Year 3 survey analyses included all 12 core subsample schools.[18]

[16] Survey windows ranged from 8 to 13 weeks during each administration.

[17] For additional information about survey items that were drawn from existing sources, see CCSR's survey documentation (https://ccsr.uchicago.edu/surveys/documentation) and the teacher surveys for the National Longitudinal Study of NCLB (www.air.org/topic/education/study-of-school-turnaround-teacher-survey-nls-nclb).

[18] The spring 2011 survey was administered electronically without any direct support from school personnel, which may have contributed to lower teacher response rates. From the fall 2011 survey onward, we enlisted the help of a survey coordinator in each school, who arranged group administrations and assisted with follow-up. This strategy helped boost response rates, although teachers in a subset of schools unfortunately continued to be non-responsive throughout the study. Teacher surveys were confidential, but incentives to teachers of any kind were prohibited.

Exhibit 2.4.
Teacher Survey Response Rates, by Survey Administration

	Core Sample			Core Subsample	
	Spring 2011	**Fall 2011**	**Spring 2012**	**Fall 2012**	**Spring 2013**
Number of Responding Teachers	794	750	878	455	485
Number of Surveyed Teachers	1,280	1,183	1,218	630	591
Overall Response Rate	62%	63%	72%	72%	86%
Response Rate Range (number of schools)					
75% to 100%	5	12	16	7	10
50% to 74%	16	9	7	5	2
25% to 49%	3	3	2	0	0
0% to 24%	1	1	0	0	0

Source: SST teacher survey, spring and fall 2011, spring and fall 2012, and spring 2013.
Notes: Includes 25 core sample schools for spring 2011, fall 2011, and spring 2012; and 12 core subsample schools for fall 2012 and spring 2013.

Exhibit 2.5 presents the characteristics of the teacher survey respondents in our analysis samples, in addition to information on the intervention model, school level, and urbanicity of the teachers' schools.

Exhibit 2.5.
Characteristics of Teacher Survey Respondents

	Spring 2011		Spring 2012		Spring 2013	
School Level	***N***	**Mean**	***N***	**Mean**	***N***	**Mean**
Teaches elementary school (percentage)	216	30.9%	298	33.9%	135	27.8%
Teaches high school (percentage)	482	69.1%	580	66.1%	350	72.2%
Intervention Model						
Teaches in a restart school (percentage)	50	7.2%	90	10.3%	62	12.8%
Teaches in a transformation school (percentage)	422	60.5%	598	68.1%	354	73.0%
Teaches in a turnaround school (percentage)	226	32.4%	190	21.6%	69	14.2%
Urbanicity						
Teaches in a rural school (percentage)	82	11.7%	114	13.0%	57	11.8%
Teaches in a nonrural school (percentage)	616	88.3%	764	87.0%	428	88.2%
Teacher Background Characteristics						
Master's degree (percentage)	341	51.0%	430	52.4%	247	54.3%
Years of experience	693	11.7	863	12.0	476	11.3
Years of experience in current school	682	5.4	863	6.5	456	6.2

Source: SST teacher survey, spring 2011, 2012, and 2013.
Notes: Includes 21 core sample schools (11 elementary schools, 10 high schools) for spring 2011; 23 core sample schools (13 elementary schools, 10 high schools) for spring 2012; and 12 core subsample schools (5 elementary schools; 7 high schools) for spring 2013.
Percentage values for characteristics with multiple categories may not sum to 100 due to rounding.

Overview of Analytic Techniques

Site Visit Analyses

The qualitative analyses of site visit data followed a five-stage process:

- **Stage 1:** Directly after site visits, site visitors entered descriptive information about the site visits (e.g., number of completed interviews, data collection challenges, a description of school context) into a preliminary Web-based data repository.
- **Stage 2:** Based on the preliminary data capture and our conceptual framework, we developed, pilot-tested, and refined qualitative codes.
- **Stage 3:** Analysts coded transcripts of the interviews and focus groups using Atlas.ti®.[19]
- **Stage 4:** Analysts compiled coded site visit and survey data in a second Web-based data repository, synthesizing findings for each school.
- **Stage 5:** Analysts conducted cross-case analyses, based on the repository data.

Stage 1: Preliminary data capture. Site visitors completed the preliminary data capture through a Web-based software program (SurveyGizmo in spring 2011 and SurveyMonkey® for all subsequent rounds of data collection). Using a Web-based platform allowed site visitors to access the data capture while they were still in the field, thus facilitating prompt entry of site visit data. The purpose of the preliminary data capture was to systematically record the details of the site visit while they were still vivid. This platform did not serve as a primary analytic tool but rather ensured that site visitors communicated key features of the site visit to other study team members, highlighted unanticipated issues, and noted gaps in data collection that would require follow-up. The preliminary data capture template asked site visitors to report case information pertaining to five topics: (1) site logistics, (2) SIG school characteristics, (3) site visit participants, (4) the school environment, and (5) first impressions of school improvement efforts.

Site visitors were encouraged to complete all preliminary data capture activities while on-site but were required to finalize the preliminary data capture within two weeks of each site visit. After site visitors completed the preliminary data capture entry, members of the senior leadership team reviewed the entire entry. If reviewers identified inconsistencies or responses that seemed biased or incomplete, the reviewers required site visitors to revise them.

Stage 2: Developing and piloting codes. Guided by our conceptual framework, we constructed a preliminary draft code list in spring 2011 based on: (1) key components of the conceptual framework, (2) regulatory requirements of SIG schools, and (3) topics that were mentioned by respondents and described in the preliminary data capture.

Subsequent to determining the overall approach to coding and drafting the initial code list, we piloted the codes with a subset of qualitative data to determine whether the set of codes covered the topics reflected in the data, whether they were of an appropriate grain size, and whether the definitions in the codebook were clear. In the subsequent years of data collection, we revised the codebook, as needed,

[19] Across the three years of data collection, audio recordings were collected for all focus groups and all but five interviews, from which near-verbatim written transcripts were produced. For the five interviews that were not recorded, analysts relied on the site visitors' field notes. Prior to coding, lead site visitors reviewed the transcripts and field notes for their respective schools, and revised the records for clarity (i.e., explaining acronyms, identifying roles of individuals named in the interviews and focus groups), as needed.

to reflect emerging themes from the site visits, as well as issues unique to the ELL and rural-special topic samples. See Appendix A for the full list of codes and their definitions.

Stage 3: Coding. To ensure that our data were coded consistently and reliably, the coding stage involved a multistep process that included training, weekly assessments of interrater agreement, frequent debriefing, and review of coded data by senior staff. In Year 1, all analysts who contributed to coding study data were required to participate in two training sessions: (1) a half-day webinar that focused on Atlas.ti®, the qualitative software program we used to code our data; and (2) a training session covering the definitions of all of the codes (see Appendix A). In subsequent years, experienced coders attended a half-day meeting to review key concepts of Atlas.ti® and revisions to the codebook, and new coders attended a separate two-hour training, in addition to the half-day training.

Analysts then coded the transcripts for every interview and focus group. The unit of coding was a segment of text reflecting a given construct. In some cases, this consisted of one or two sentences, in other cases, one or two paragraphs. Analysts were trained to capture comparable segments of text for each coded passage, including enough adjacent text to enable a researcher to understand the data when a coded passage was retrieved from an interview or focus group.

Assessing interrater agreement throughout the coding process entailed the following procedures:

- Formal interrater agreement checks, conducted during the course of the coding process (two times in spring 2011 and once each in spring 2012 and 2013), required analysts to independently code passages from an interview transcript. These passages, selected by the two senior staff leading the task, were chosen to reflect a diverse set of codes, including those that were the most conceptually challenging. To pass an interrater agreement check, analysts had to match at least 75 percent of their codes to a key created by the two senior staff, while limiting any additional codes added beyond those in the key to no more than 25 percent of the total number of codes in the key. No analysts were permitted to code data until they passed the initial check. Analysts who did not meet this standard after the first attempt were required to repeat the process with a new passage of data until successful completion. Following each attempt, the task leaders reviewed the interrater agreement checks individually with the analysts to further build expertise and familiarity with the code list and coding strategies. Exhibit 2.6 presents the passage rates for each interrater agreement check.
- In between formal interrater agreement checks, analysts conducted partner checks to review each other's work and maintained a message board to capture questions and concerns. In addition, weekly meetings focused on actual data pulled from interviews and focus groups that the analysts found difficult to code, which helped to highlight coding challenges and reach consensus on how to proceed. Decisions about necessary changes to code definitions, coding procedures, or the addition of new codes were documented by the coding task leaders and circulated among team members. The analysis team rarely added new codes during the coding process to avoid coders having to revisit previously coded data, thus creating workflow inefficiencies. When new codes were necessary, the coding task leaders reviewed all data files to ensure that analysts had applied the new codes appropriately and consistently across transcripts.

Exhibit 2.6.
Interrater Agreement Check Passage, 2011–2013

	Spring 2011	Spring 2012	Spring 2013
Check 1			
Passed on first attempt	0	1	0
Passed on second attempt	0	1	2
Passed on third attempt	5	6	2
Passed on fourth attempt	3	-	-
Total number of coders	8	8	4
Check 2			
Passed on first attempt	1		
Passed on second attempt	4		
Passed on third attempt	1		
Total number of coders	6[a]		

[a] Two coders were not involved in the entire coding period, leaving six active coders at the time of the second interrater agreement check.

- Prior to their use in the next stage of analysis (Stage 4), all data were reviewed by the coding task leaders. As part of this ongoing review process, the task leaders examined all coded interview and focus group transcripts in a single case study school, checking coded passages for accuracy and consistency both across the individual case and against the coding guidelines. Where inconsistencies were identified, the task leaders communicated with the analyst to make the required revisions.

After all of the interview and focus group data were coded, analysts used Atlas.ti® to run queries that helped sort the data (e.g., by code or group of codes). These queries served as the foundation for the data repository (Stage 4).

Stage 4: Data repository. After all data from a case study school were coded, analysts entered analyst notes and coded passages in a Web-based, password-protected data repository in the SurveyMonkey® platform. The data repository consisted of open- and closed-ended questions to summarize the data for each case. The topics addressed in the data repository aligned with our conceptual framework and included questions related to the topic areas featured in each year of data collection (i.e., school context, key improvement strategies, and perceptions of SIG and the change process for all three years; contextual background information and the rationale behind SIG implementation in Year 1; school leadership and organizational capacity in Year 2; and respondent reflections on the change process over the three years and during the most recent year [2012–13] and on sustainability of improvements after the end of SIG in Year 3).

The data repository accomplished four main purposes: (1) provided a summary of the data on selected topics across all respondents for each school; (2) ensured that data were of a comparable level of detail and quality across cases, so that analysts could more easily review and compare the synthesized data across schools; (3) allowed analysts to easily view and download data for cross-case analyses; and (4)

created an "audit trail"[20] because analysts were expected to document the sources for the findings synthesized in each repository question.

When responding to questions in the data repository, each analyst first ran queries in Atlas.ti®, identifying coded text that aligned with each question. The purpose of an Atlas.ti® query was to retrieve all the relevant data for a given code from a given case. The coded data consisted of excerpts of text, which the analyst had identified as corresponding to a given code. To facilitate the queries in Atlas.ti®, the question stem in the data repository included a list of codes (in brackets) that should be used. For example, to respond to the question below, the analyst would retrieve data for a given school that had been coded as SIG_model selection.

15. Please describe the rationale for selecting the intervention model for this school. If there are divergent reports from different stakeholders, please account for those as well. Please be sure to include the perspective of the district administrator.[SIG_model selection] Download

Before entering data in the repository, the analyst determined if there were data to address the question—that is, whether respondents were given the opportunity to respond to questions on this topic. For certain analyses, analysts determined that the qualitative data for some schools were insufficient to support analyses, and these schools were excluded from the analysis.

Next, the analyst reviewed and summarized the coded data for the case study school in paragraph form in the data repository. The analyst was asked to include information on how many and which types of respondents provided data on the case study school and to note reasons why data may not have been reported. If there were divergent views within a given school (i.e., respondents who expressed conflicting views), the analyst documented these as well. The following excerpt (an actual data repository entry for one school) illustrates how analysts documented which respondents provided data on a given topic and how many respondents expressed consistent views:

> *The school[21] principal and district administrator both affirmed that they chose the Turnaround model because they wanted to replace teachers, and the model gave them the leverage to remove 50% of the staff. The principal also claimed that in conversations with parents, "The thing that came up was that the teachers weren't good." He also noted that there had been frequent misassignments of teachers (e.g., a kindergarten teacher teaching seventh-grade English). In focus groups and interviews, teachers, instructional coaches, and other administrators reported that they had not been involved in the SIG application process and could not report on the rationale for the model selection.*

Closed-ended questions in the repository probed the dimensions of implementation outlined in our conceptual framework (coherence, divergence from prior practice, buy-in) and were presented as a rubric rating scale. When selecting a rating for the case study school, the analyst was required to document which respondents had provided data on a given topic and to justify the rating (see Exhibit 2.7).

[20] An audit trail is documentation that creates a chain of evidence that may be inspected by other researchers who seek to reproduce the findings (see Lincoln & Guba, 1985).

[21] All descriptions of the core sample schools use pseudonyms, and identifying characteristics of schools and individuals have been masked (e.g., the reported gender of respondents was randomly assigned).

Exhibit 2.7.
Sample of the Online Data Repository

30. If respondents comment on the safety and orderliness of the school during Spring 2013 interviews or focus groups, please note this shortly after the interview or focus group. A few words for each respondent in list form should suffice (e.g., principal called school "very safe," with "no reports of crime in the surrounding neighborhood")

All respondents at Gale Secondary suggested that the school was safe and orderly, with most respondents (instructional coach; three interviewed teachers; four focus group teachers) answering with a simple, emphatic, "yes". One interviewed teacher highlighted the "family-like atmosphere" of the school, while the principal described how issues external to the school did not permeate through the walls of the school: "We maintain a pretty good—we know who those folks that are involved out on the streets that are here. And we keep pretty close tab on that and I've tried to keep a good relationship built with them to try and minimize anything that would happen here." One teacher in a focus group acknowledged while there are some community-related issues that are worrisome, "we haven't found any sort of fear here at the school." A teacher in a separate focus group said: "Extremely. Yes, you know, especially with things going on in the news, we feel extremely safe. We've had drills that deal with safety; every teacher knows what to do, we have crisis plans in place, staff development, we've

31. Based on the data noted above, how would you rate the safety and orderliness of the school in Year 3?

- [x] Safe/Orderly. At least two respondents explicitly described the school as safe or as having none or few behavior problems among students, and no respondents disagreed or made statements to the contrary.
- [ ] Mixed. Respondents made contradicting or differing statements about the school's safety and about student behavior.
- [ ] Unsafe/Disorderly. At least two respondents described a feeling of being unsafe or behavior problems among students, and no respondents disagreed or made statements to the contrary.
- [ ] Insufficient evidence

After the analyst completed the data repository for a school, one of the site visitors read the entire entry, ensuring that all responses were detailed, documented data sources, provided justification for summary statements, and were an accurate depiction of the school. In addition, senior researchers reviewed responses across schools to ensure that the level of detail across schools was comparable.

Stage 5. Cross-case analyses. When the data repository was complete, analysts reviewed the data across all schools for a given topic (e.g., initial SIG processes, teacher replacement, or leadership). For most analyses, analysts developed classification schemes to categorize schools on the basis of the data and the research base associated with each topic. For example, with regard to the perceived performance problems in each school, analysts established decision rules to distinguish between schools in which respondents assumed *internal* responsibility for the history of low performance and schools in which respondents focused on challenges *external* to the school. Analysts extracted the relevant data from the data repository, reviewed the evidence for each school, and classified the school accordingly. Analyses that are related to perceived changes from years prior to SIG implementation or over the three years of the SIG program exclude the responses of principals and teachers who were new to their schools.

After an analyst classified the schools, a second analyst reviewed the coded data and also classified the school, providing a measure of interrater agreement. Across the school-level classifications, the first set of interrater agreement ratings ranged from 72 to 100 percent. In cases of disagreement, a senior researcher reviewed the ratings and resolved discrepancies. When classifications were complete, the site lead for each school was required to review the data and the rating. When there was a discrepancy between the analyst's rating and that of the site visit lead, study team members jointly reviewed the data, returning to the original coded data if necessary. Thus, for every school-level classification included in this report, multiple researchers reviewed and approved the analysis. For further details on each set of decision rules and definitions of school-level classifications, see Appendix B.

After the initial school-level classifications were identified, analysts examined associations between selected classifications, based on our conceptual framework. For example, were schools in which respondents reported substantial progress located in "benign" environments characterized by limited reports of crime, homes in good repair, and few reports of family instability? To conduct these analyses, analysts created two-way tables to determine if there were relationships between sets of school-level classifications.

In summary, all qualitative analyses were guided by principles of high-quality qualitative analyses: (1) clear standards of evidence for codes and ratings, (2) documentation of an "audit trail," (3) procedures for verifying consistency of data across cases, and (4) measurement of interrater agreement in coding.

Use of Quotations. Throughout this report, we incorporate direct quotations from respondents, which is a standard technique in qualitative case study research (Miles, Huberman, & Saldaña, 2013). There are two primary reasons for their use, one methodological and one stylistic.

With regard to methodology, we include direct quotations from respondents to lend more transparency to our constructed measures and allow the reader to better judge whether the measures appear well-grounded in the data. As described above, we developed school-level categorizations that aggregate qualitative responses from multiple interview and focus group respondents (see Appendix B for a detailed description of each measure). To do so, we reviewed coded data and categorized schools based on documented decision rules, thereby condensing the qualitative data into a more systematic and quantitative measure. This conversion process sometimes involved making judgments about whether specific quotations from study respondents met the established thresholds for a particular categorization. By providing example quotations with explanations of how we categorized schools rather than merely describing these categorizations in the abstract, we more concretely illustrate how we applied the decision rules. These quotations were not selected randomly but rather to be illustrative of the types of quotations associated with particular decision rules so that the reader can more fully understand each categorization.

With regard to style, quotations enhance the transparency, clarity, and relevance of this study, which is based largely on qualitative data. These data uniquely provide detailed, contextual information that can convey meaning through illustrative examples. Quotes were purposefully selected to enrich the findings arrived at through systematic, carefully-documented analyses. As with the quotations selected for methodological reasons, quotations selected for stylistic reasons are not representative of all quotations in our data. It is important to bear in mind that these quotations are not used to validate an analysis, or to "prove" a particular finding, nor should they be construed to represent the sole evidence on which a finding was based. They are only meant to enrich a particular finding by conveying richer contextual information that is, by necessity, masked from the study's more systematic aggregate measures.

Teacher Survey Analyses

The surveys were designed to measure constructs pertaining to the school as a whole related to contextual influences, selected improvement actions, and dimensions of implementation (see Exhibit 1.2 in Chapter 1). We assessed the quality of the teacher survey scales by conducting a confirmatory factor analysis on the items separately for each scale and by computing the scale reliability (Cronbach's alpha). Exhibit C-1 in Appendix C shows the reliability and contributing items for each scale.[22] Scale scores were computed on the basis of the mean of the individual items composing each scale. Where

[22] Scale reliabilities were calculated using data from spring 2011 surveys administered to teachers from 21 of the 25 core sample schools that exceeded a 50 percent response rate.

one or more items were missing, the scale was computed as the mean of the remaining items.[23] The school resources scale and the student behavior scale ranged from 1 (major challenge) to 4 (not a challenge). The other six scales ranged from 1 (strongly disagree) to 4 (strongly agree). For analyses of teacher collaboration and coherence of programs within the study schools, we relied on individual survey items, as the items for the respective analyses did not factor together to form reliable scales.[24] Response options for the three stand-alone collaboration items ranged from 1 (never) to 4 (often), and the three stand-alone coherence items from 1 (strongly disagree) to 4 (strongly agree). See Appendix C for additional details about the teacher survey analyses.

[23] For example, if a teacher answered the first two items listed in the school commitment scale but did not answer the third item, his or her school commitment scale value would be the mean value of the first two items only. If another teacher skipped the first two items but answered the third, his or her school commitment scale value would be the value of the third item. Across scales, between two percent and four percent of teachers had a missing value on one or more scale items.

[24] The reliabilities of the scale formed by combining the three items related to teacher collaboration in Years 1, 2, and 3 were 0.66, 0.72, and 0.68. The reliabilities of the scale formed by combining the three items related to programmatic coherence were 0.57, 0.40, and 0.39.

Part II: Building Human Capital in SIG Schools

At the heart of a school's capacity to improve outcomes for students are the knowledge, skills, and dispositions of the staff responsible for teaching those students and leading the improvement processes—that is, the individual and collective human capital of the adults in the school. The link between adult human capital and student outcomes has been documented in research and supported by theory (Aaronson, Barrow, & Sanders, 2007; Cohen & Ball, 1999; Hanushek, 1986), as has the limited human capital generally available to persistently low-performing schools (Beaver & Weinbaum, 2012; O'Day, Goertz, & Floden, 1995). In addition, many observers have noted that an emphasis on capacity building—and particularly on building the capacity of school personnel—may be particularly important for sustaining improvements beyond the short-term infusion of funds in grant programs such as SIG. In recognition of the need to enhance human capital in these schools, SIG policy requires staffing changes, professional learning activities, and partnerships with districts and external providers that are all ostensibly aimed at improving staff knowledge and skills.

Part II of this report thus focuses on the strategies of the 25 core sample schools to build human capital as an avenue toward improving student success. For both leaders and teachers, we considered two main leverage points or strategic approaches: (1) changing the mix of individuals performing key functions in the school through staff replacement, role assignment, and addition of new positions; and (2) increasing the knowledge and skills of existing staff through professional learning. We incorporated data from the year prior to SIG (2009–10) and the first and second years of the SIG program (2010–11 and 2011–12) in these analyses. The primary data sources included the teacher survey administered in 2012, as well as interviews and focus groups conducted during site visits to all core sample schools.[25]

Part II consists of five chapters. Chapter 3 focuses on efforts to enhance school leadership by replacing the principal and expanding distributed leadership opportunities. Chapter 4 describes schools' efforts to build human capital by altering the composition of the teaching staff and others who provide support to teachers. These efforts included teacher replacement (both SIG mandated and otherwise) and the addition of new staff positions. The chapter also considers the challenges schools faced in recruiting and retaining high-quality teachers and identifies the supports their district provided to address those challenges. Chapter 5 looks at schools' efforts to build the capacity of their teachers through professional learning, including the range of hours spent in professional learning activities, the types of activities offered to teachers (job-embedded versus traditional), the structures that schools and districts established to support teacher learning (specifically around collaboration and data use), and the extent to which teachers perceived professional learning opportunities to be aligned with school needs and effective at changing their own practices. Chapter 6 explores how districts and external support providers contributed to SIG schools' efforts to build human capital. Here, we describe in greater detail the types of support that districts and external support providers extended to schools, as well as the extent to which those supports aligned with the capacity-building approaches described above. We also discuss the extent to which school-level stakeholders perceived district and external provider supports to be positive for the school's improvement process. Chapter 7 concludes Part II with a synthesis of the various efforts that schools reported making in the areas above and consideration of whether some schools put forth more or less overall effort in their human-capital-building activities.

[25] Specific chapters of Part II detail which data are being included in the analysis of efforts to build human capital. More detailed descriptions are also available in Appendix B.

In Part II of this report, we find that the majority of case study schools were trying to build human capital using both staffing and professional learning strategies. Although it is clear that these SIG schools received numerous types of supports from their districts and a wide range of external support providers, it is less clear whether these supports will ultimately build human capital. In Part III of this report, we analyze the relationship between efforts to build human capital and changes in the organizational capacity of the school, as measured in Year 1 and Year 3 of the study.

Chapter 3: Building Human Capital Through Leadership Strategies

In this chapter, we describe efforts to build human capital in the 25 core sample schools by (1) replacing the principal and (2) distributing leadership responsibilities among a greater portion of the existing staff.

Case study research suggests that the principal plays a central role in leading major change efforts in a school (Edmonds, 1979; Hassel & Hassel, 2007; Herman et al., 2008; Picucci et al., 2002; Rhim et al., 2007; Johnson & Asera, 1999; Whiteside, 2006). As with leaders of any complex organization, principals have multifaceted roles that demand significant knowledge and skills. For example, principals make budgetary decisions and provide administrative oversight of instructional approaches and professional learning strategies. Principals also commonly play an important role in assessing school needs, setting goals, and implementing improvement strategies. SIG requires schools implementing the turnaround or transformation models to replace the principal if the principal has been at the school for more than two years prior to the first year of receiving SIG (U.S. Department of Education, 2010).[26] This requirement reflects the assumption that entrenched, ineffective leadership contributes to persistently low school performance and bringing in a new principal will help create the conditions necessary to improve.

Although principals play a central role in leading major change efforts in a school, both empirical studies and theoretical explorations of leadership have also suggested that leadership in a school setting may come from multiple sources and be distributed across multiple individuals and structures (Elmore, 2000; Spillane, Halverson, & Diamond, 2004). Recent research in more than 100 U.S. schools showed that responsibility for school leadership functions was typically distributed among three to seven people, including administrators and specialists (Camburn, Rowan, & Taylor, 2003). This distributed leadership strategy reflects the assumption that leveraging existing knowledge and skills will enhance the collective leadership capacity in the school, empower staff to take ownership of the improvement process, and provide some continuity if there is leadership instability at the principal level.

Box 3.1. Key Chapter 3 Findings

- Most core sample schools (21 of 25) replaced their principal in 2009–10 or 2010–11. Between 2009–10 and 2011–12, 9 of 25 core sample schools replaced their principal twice.
- Half of the principals (10 of 20) who were new to their schools in 2010–11 or 2011–12 were described as an improvement over their predecessors by teachers, instructional coaches, school leadership teams, or parents.
- In Year 2 of SIG, respondents in 7 of the 25 core sample schools reported having structures and opportunities for distributed leadership, respondents in 12 schools reported a moderate level of distributed leadership, and respondents at the remaining 6 schools provided little evidence of distributed leadership.
- In 15 schools, respondents reported that administrators made an effort to establish or enhance structures to support distributed leadership during the first two years of SIG.

[26] Although schools implementing the restart model are not formally required to replace the principal, they typically do as part of the transition to a new governance structure (e.g., education management organization or charter management organization).

Principal Replacement

Replacing a weaker principal with a stronger one may build organizational capacity if the new leader can create a shared direction, help build the knowledge and skills of the staff, redesign the organization to support the staff's work, and guide the "technical core" activities to manage curriculum and improve instruction (Leithwood, Harris, & Strauss, 2010). Although it is beyond the scope of this study to determine whether new principals were able to accomplish these "high-capacity" tasks, this section discusses the extent to which principals were replaced in the 25 core sample schools between 2009–10 and 2011–12, and whether other stakeholders perceived these replacements as improvements over their predecessors.

Most core sample schools (21 of 25) replaced their principal either in the year before SIG (2009–10) or in Year 1 of SIG (2010–11). New principals arrived at 11 of the 25 core sample schools in the year prior to SIG, and at 11 of the 25 core sample schools in the first year of SIG.[27] In Year 2 of SIG (2011–12), 9 core sample schools replaced their principal. Even though schools implementing the restart model were not formally required to replace their principal, all three of our restart schools replaced their principal in Year 1 of SIG. All of the remaining core sample schools, including the ones that did not replace their principal, were implementing either the turnaround or transformation models, which required schools to replace their principal unless the principal had served at the school for less than two years. Box 3.2 profiles a core sample school that acquired a new principal during the year prior to SIG (2009–10) and reportedly underwent positive changes under the new principal's leadership.

Box 3.2. Rossignol Elementary: An Experienced Principal With a Clear Vision for Improvement

Rossignol Elementary is a high-poverty, high-minority school located in a culturally diverse U.S. city. According to interviewed district and school stakeholders, in the years leading up to SIG, Rossignol suffered from weak and inconsistent leadership. A spate of inexperienced principals reportedly cycled in and out of the building, most of them lasting only a single year or less. Veteran school staff mentioned that one of the school's recent principals had been a particularly poor fit for the school and had sown a culture of distrust within the school community. Additionally, teachers described the school as "forgotten" and "neglected" by district leaders, who tended to assign the school teachers that other schools in the district did not want.

Rossignol's leadership situation changed, however, during the year prior to SIG when a new leader took control of the school in what district and school staff characterized as an important turning point. Unlike most of her predecessors, the new principal had more than a decade of experience leading schools. She also had experience working in the district central office, a role that had familiarized her with the inner workings of the district bureaucracy and allowed her forge connections with key community partners. The principal reportedly leveraged this background to acquire new resources and supports for the school. For example, some of the principal's early priorities involved securing new instructional materials (e.g., science kits, technology) and engaging community partners to provide family outreach and support. One teacher commented, "If we didn't have [the new principal], we wouldn't have what we have. She has so many contacts. She knows what she's doing. Had they put another inexperienced principal here, we would be at the bottom." Another teacher,

[27] One school replaced its principal in 2009–10 and then again in 2010–11.

(continued from previous page)

who expressed similar sentiments, underscored how the new principal had succeeded in acquiring resources that teachers had long been "begging for."

Rossignol stakeholders universally characterized the new principal as a strong, influential, "hands-on" leader with a clear vision for improving the school. Multiple respondents credited her with building a cohesive teaching staff that was committed to realizing her vision, in part by helping individuals who were not on board with the vision find a position elsewhere. In spring 2012 (the end of SIG Year 2), interviewed teachers indicated that the principal had thus far employed a fairly directive leadership style to achieve her vision, and they spoke of her assertiveness in largely positive terms. For example, one teacher leader explained, "[At] the first leadership meeting, [the principal] said, 'If I'm seeking advice, I'll tell you. If I'm not seeking advice, I'm the boss.' I thought that was great. Now, we know what the deal is. You can often have a principal that seems like they want your input, but they don't. With [this principal], you know what you're getting." Several teachers attributed the principal's directive style to the school's dire situation. "I think it's that we need to get a whole lot of things in place, and that's the most efficient way to do it," one teacher surmised. However, these teachers predicted that the principal might adjust her leadership style once the school had more systems and supports in place. Overall, school stakeholders looked ahead to their third and final year of SIG—and their fourth year with the same principal—with optimism for continued progress.

During the three-year period between 2009–10 and 2011–12, 9 of 25 core sample schools replaced their principal twice. Three schools maintained the same principal for all three years, and the remaining 13 schools replaced their principal once during that time period. Although a previous case study of SIG implementation suggested that districts struggled to identify school leaders with sufficient qualifications (McMurrer, 2012), most districts in our core sample appeared able to bring in principals whom they thought could be successful at turning around their schools. For example, the new principals in our sample were often experienced principals whom district administrators reported identifying and recruiting for their positions. Of the 20 principals who were hired in Year 1 or Year 2 of SIG, 14 were experienced leaders, most of whom had 5 to 10 years of experience as principals at other schools, in addition to longer term experience as teachers and/or assistant principals in low-performing schools. Six of the new principals had never held a principalship before, although two of them reported having previously been assistant principals at the same school.

Most of the principals who were new to their schools in Year 1 or 2 of SIG reported that somebody from within the district had identified them for the position and had encouraged them to apply for it. For example, the principal at one school, a former district administrator, accepted the position after serving as assistant principal at another low-performing school in the district. Colleagues from the district recommended her because of her background (she was Latina and also had worked with that population in the past) and knowledge of the district's key initiatives. Similarly, at another core sample school, a district administrator and school staff member mentioned that the new principal had notably improved student performance at another elementary school over a span of three years.

Half of the principals (10 of 20) who were new to their schools in 2010–11 or 2011–12 were described as an improvement over their predecessors by teachers, instructional coaches, school leadership teams, or parents (see Box 3.3). For example, multiple teachers at one school described the new principal as "reflective" and having "an open door policy," whereas they explained that the former principal would "just bark at us" and that student learning "didn't matter to him." In contrast, teachers in a focus group at another school reported that the new principal did not treat them with respect, and

an instructional coach described much less interaction between the principal and staff, noting that "a different administrator has a different way of doing things."

Box 3.3. Perceived Change in Quality of Principal Leadership

School classifications on perceptions of the change in quality of principal leadership for the 20 core sample schools that replaced their principal in Year 1 or Year 2 of SIG are based on Year 1 and Year 2 interview and focus group data (see Exhibit B.1 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups (excluding newly hired staff): teachers, instructional coaches, and school improvement team members.

Quality of principal leadership improved

- Respondents in at least two respondent groups described the change in principal in positive terms; AND
- No more than one respondent described the change in principal in negative terms.

Quality of principal leadership did not change

- Respondents did not comment on the quality of the change in principal leadership or described the change in neutral terms.

Quality of principal leadership declined

- Respondents in at least two respondent groups described the change in principal in negative terms; AND
- No more than one respondent described the change in principal in positive terms.

Survey data from Year 1 and Year 2 provide additional evidence of how teachers perceived how the quality of leadership changed once the principal was replaced. We used two survey scales—principal-teacher trust and principal instructional leadership—to compare teachers' perceptions of their principals in Years 1 and 2 of SIG for the nine core sample schools that replaced their principals in Year 2 of SIG (see Exhibit 3.1).[28] Both survey scales included questions measured using a 4-point Likert scale. In four of the five schools where interview and focus group respondents described their Year 2 principal as an improvement over their predecessor, the Year 2 principal-teacher trust and principal instructional leadership scales were also higher relative to Year 1. In the fifth school, the principal-teacher trust scale was higher but the principal instructional leadership scale was lower. In the two schools where the new principal was not described in favorable terms by site visit respondents, the two survey scales were lower in Year 2 relative to Year 1.

[28] This supplementary analysis reflects changes in survey scales related to principal leadership from Year 1 to Year 2, only for the nine schools that had new leaders in Year 2. Because we have no pre-SIG survey data, we cannot present analogous changes in survey scales for the principals who were new to their schools in Year 1 of SIG. This analysis is intended to provide additional information on the perceived quality of new principals, but it is distinct from the qualitative analysis described in Box 3.3.

Exhibit 3.1.
Perceived Improvement of New 2011–12 Principals Compared With 2010–11 Principals

	Qualitative Perceptions of Principal Improvement Relative to Year 1	Principal-Teacher Trust		Principal Instructional Leadership	
		Year 1	Year 2	Year 1	Year 2
Gale Secondary	Improved	2.9	3.4	3.1	3.4
Tyron Elementary	Improved	2.4	2.6	2.6	2.9
Island Bay Elementary	Improved	1.2	3.0	1.5	2.9
Meribel High	Improved	3.0	3.1	3.4	3.1
Aerovista High	Improved	2.8	3.0	2.7	3.0
West Marble High	Neutral	2.7	3.0	2.7	2.6
Sterling Slope Elementary	Neutral	3.6	3.2	3.7	3.5
Coral High	Declined	3.3	2.6	3.3	2.9
Melon Elementary	Declined	3.4	2.7	3.2	3.2

Source: SST respondent interviews and focus groups, spring 2012; SST teacher survey, spring 2011 and 2012.
Notes: Includes the 9 core sample schools that had a new principal for the 2011–12 school year. All school names are pseudonyms.
Rows are shaded to indicate schools in which the Year 1 principal had been reportedly replaced in a deliberate effort to improve capacity. In other schools, principals were reportedly replaced because of within-district transfers or retirement.

Four of the five principals whom site visit respondents perceived to be an improvement over their predecessors reportedly had been brought in to the school in a deliberate effort to improve capacity (indicated by the shaded rows in Exhibit 3.1).[29] In three of these cases, district administrators specifically explained that the leadership change occurred because the prior principal was a "bad fit" or unqualified for the job. For example, at one school, the district administrator explained that the principal who was hired in Year 1 of SIG was not up to the challenges of school turnaround: "We've lent a very heavy level of support, particularly with that school leader this year. But, what we didn't see was a certain level of leadership to have managed the…many moving parts to manage this school year." Five other core sample schools also had new principals in Year 2, but their predecessors reportedly left for personal reasons or were promoted to other positions in the district, rather than having been removed to try to improve leadership at the school.

Despite the fact that our qualitative and survey data indicate that in some of our core sample schools the replacement of the principal was perceived positively, principal replacement as an improvement strategy is not without risk. For example, as noted above in at least a few schools, it did not appear that principal replacement decisions were deliberately made with an eye toward improving leadership, and in at least a few schools, it appeared that the replacement principal was not a good fit for the school. Furthermore, principal replacements sometimes occurred in contexts in which leadership instability was already identified as part of the performance problem. Over the three-year period between 2009–10 to 2011–12, only 3 of the 25 core sample schools maintained the same principal, while 9 had two leadership changes over three years and the remaining 13 had one change. Analysis of site visit data from Year 1 of SIG revealed that respondents from 10 of the 25 core sample schools reported that high turnover in leadership had been a challenge prior to SIG and attributed their history of low performance, in part, to leadership instability. As a teacher in a focus group from one such school explained, "I think

[29] Schools were classified as having replaced their principal as a deliberate effort to improve capacity if reported by a district administrator or at least one school-level respondent (principal, teacher, or instructional coach) (see Exhibit B.2 for more detail on the analytic procedures).

one of the things that has been plaguing this school since the beginning is inconsistency. You get administrators and teachers constantly changing, and it's really hard….Every two years we get a new administrator." A colleague in the same focus group concurred: "It is frustrating to have these constant changes for teachers and administrators, when we have some things that we'd maybe like to talk about at the end of the year and discuss for next year…and we don't even know if our principal is coming back."

Distributed Leadership

Distributed leadership—also known as shared leadership—is a leadership model in which principals have multiple school staff members take on leadership roles at the school. Scholars of distributed leadership advance numerous rationales for such an approach. First, school leadership (particularly among the lowest-performing schools) is too complex a job to be accomplished by a single, "heroic" leader (Camburn, Rowan, & Taylor, 2003). Distributing responsibility across a wider range of individuals can more effectively leverage staff expertise, improve collective decisions, and promote implementation of those decisions. Timperley (2005) explains that distributed leadership "has the potential to build capacity within a school through the development of the intellectual and professional capacity of the teachers" (p. 3). In low-performing schools, such as those in our sample, principal turnover is common. If principals are able to distribute leadership opportunities across a wider set of teachers and other support staff (e.g., assistant principals, instructional coaches), then these efforts could add to the collective organizational capacity of the school by building the knowledge and skills of individual school staff and by better preparing the school for changes in principal leadership.

School leaders' approaches to sharing leadership responsibilities among school stakeholders and engaging school staff in decision-making processes can vary. Efforts to distribute leadership can include forming leadership teams and committees, creating leadership roles for teachers, making decisions jointly with other staff, and delegating decision-making authority to others. Studies of distributed leadership have focused on formal and informal leadership structures and roles (which Spillane [2005] refers to as the "leader-plus" view), as well as the nature of the interactions among leaders, followers, and their situations (Hallinger & Heck, 2010; Spillane, 2005). It was beyond the scope of this study to conduct a systematic inquiry of the nature of interactions among leaders and followers. Our analyses focus primarily on the "configuration" of the distributed leadership activities in each of the 25 core sample schools, similar to the work of Camburn et al. (2003). Using qualitative data from Year 2 of SIG, we examined the extent to which school respondents perceived that their schools had six hypothesized structures and opportunities for distributed leadership (see Box 3.4), including:

- Clear set of responsibilities for school leadership team
- School leadership team membership open to nonadministrative school staff
- School leadership team involvement in decision-making process
- Nonteaching staff (e.g., assistant principals, instructional coaches) involvement in decision-making process
- Teacher involvement in decision-making process
- Opportunities for teachers to assume leadership roles

The features that we identified are consistent with measures employed in other studies (Camburn et al., 2003; Louis et al., 2010).[30] Our index of distributed leadership is a summative measure; we hypothesized that simply having a leadership team was not sufficient to promote distributed leadership schoolwide. Rather, this team needed to have a decision-making role and ideally would include representation from staff across the school, not only teachers. In addition, we sought to reflect informal leadership positions.

Box 3.4. Perceptions of Distributed Leadership in Core Sample Schools

School classifications on perceptions of distributed leadership are based on Year 2 interview and focus group data (see Exhibit B.3 for more detail on the analytic procedures). Because there were no natural breaks in the distribution, cut points were set to divide the schools roughly into thirds. For this analysis, *respondents* refer to individuals from the following respondent groups: principals, teachers, instructional coaches, and school leadership team members, although the identification criteria for individual features associated with distributed leadership—specifically the number and type of respondents—varied by feature. *Clear set of responsibilities for school leadership team* and *school leadership team open to nonadministrative school staff* are based on at least one member of the school leadership team; *school leadership team involvement in the decision-making process* are based on the principal; *nonteaching staff involvement in the decision-making process* are based on at least two from the following respondent groups—instructional coach or other school administrator (e.g., assistant principal); and *teacher involvement in decision-making process* and *opportunities for teachers to assume leadership roles* are based on at least two teachers.

Structures and opportunities to support distributed leadership

- Respondents perceived that the school had at least five of the six features associated with distributed leadership.

Moderate structures and opportunities to support distributed leadership

- Respondents perceived that the school had three or four of the six features associated with distributed leadership.

Little/no structures or opportunities to support distributed leadership

- Respondents perceived that the school had one or two of the six features associated with distributed leadership.

Respondents at 7 of the 25 core sample schools reported that structures and opportunities for distributed leadership existed during Year 2 of SIG. Exhibit 3.2 lists the perceived features of distributed leadership for each core sample school.

- **Leadership team membership is open and varied.** Leadership team members in these seven schools reported that membership was open to nonadministrative staff and included staff with varied roles in the school. The leadership teams at these schools comprised a variety of staff, including teachers (three schools), deans (three schools), coaches (two schools), external support providers (one school), and community school liaisons (one school). For example,

[30] For example, survey measures used by Louis et al. (2010) include these: "teachers have an effective role in school-wide decision-making" and "the school's principal ensures wide participation in decisions about school improvement," both of which correspond to indicators on our index of distributed leadership.

membership at one of the elementary schools included administrators, teachers, coaches, paraprofessionals, the technology specialist, and the school counselor.

- **Leadership team has a clear set of responsibilities.** For example, at two of the schools with the most evidence of distributed leadership, the primary role of the leadership team was to develop school improvement plans and monitor progress against goals and plans. The team at one of these schools was involved in strategic planning through setting goals for the upcoming year and reviewing lessons learned from past years. A member of the leadership team said the team works to "establish policy, working with input from staff. [We] try to do forward planning for next year. We take a look at what is successful and not successful." At the five other schools, leadership team members reported that the team's primary role was to serve as a vehicle for communication and collaboration. In these schools, the leadership team members provided input to administrators based on their interactions with teachers and communicated information to teachers on behalf of administrators and the leadership team.
- **Leadership team has a decision-making role.** In five of the seven schools, principals reported that in addition to providing input, the leadership team members play an active role in making decisions. The principal at one of these schools reported that the leadership team makes school-level decisions regarding curriculum, school climate, data, and discipline. The principal at another school reported that the leadership team makes school-level decisions in other areas: scheduling, structuring the extended day, developing afterschool programs, and planning schoolwide events.
- **Principal's decision-making process is inclusive of nonteaching staff.** In all seven schools, nonteaching staff—whether or not they were on the leadership team—including assistant principals and coaches, reported that they have the ability to contribute to the decision-making process, often through leadership team meetings, committee membership and meetings, formal requests for information, or the principal's open door policy. The literacy coach at one school said, "One thing we have in place is a formal coaches meeting, which we didn't have last year.…We [coaches, assistant principal, and principal] really think about what makes most sense; bring teacher feedback together, [it is a] shared decision-making process."
- **Teachers provide input into the decision-making process.** In six of the seven schools, teachers reported that they provide input into the decision-making process. A teacher at one of these schools noted, "They always ask us for our opinions…It's a schoolwide involvement and decision making." One teacher at another school noted, "It's not just top down but also bottom up." Another teacher at the same school elaborated: "I feel I can make decisions to provide input and have my ideas evaluated in a collaborative way."
- **Teachers have leadership opportunities.** Although participation in an inclusive and empowered leadership team is an important aspect of distributed leadership, schools that embrace distributed leadership often extend leadership opportunities—whether formal or informal—to teachers. At six of the seven schools with the highest levels of distributed leadership, teachers reported that they have opportunities to be school leaders. The most commonly reported leadership opportunities for teachers included leading professional learning activities and teams, including grade-level data teams and professional learning communities. At one school, for example, teachers are reportedly appointed as leaders of subject-specific improvement teams and grade-level team leaders.

Exhibit 3.2.
Measure of Distributed Leadership in Core Sample Schools, 2010–11

	Respondents Reported Leadership Team Is Open and Varied	Respondents Reported Leadership Team Has a Clear Set of Responsibilities	Respondents Reported Leadership Team Has a Decision-Making Role	Respondents Reported Principal's Decision-Making Process Is Inclusive of Non-teaching staff	Respondents Reported Teachers Provide Input into the Decision-Making Process	Respondents Reported Leadership Opportunities for Teachers at the School	Overall Classification
Blizzard Bay Elementary	Yes	Yes	Yes	Yes	Yes	No	High
Gale Secondary	Yes	Yes	Yes	Yes	Yes	Yes	High
Haven Way Elementary	Yes	Yes	No	Yes	Yes	Yes	High
Inner Brooks High	Yes	Yes	Yes	Yes	Yes	Yes	High
Island Bay Elementary	Yes	Yes	Yes	Yes	No	Yes	High
McAlliston High	Yes	Yes	Yes	Yes	Yes	Yes	High
Sterling Slope Elementary	Yes	Yes	No	Yes	Yes	Yes	High
Aerovista High	Yes	Yes	No	Yes	No	Yes	Moderate
Baltimore Bridge Elementary	No	Yes	No	No	Yes	Yes	Moderate
Big Acorn High	Yes	Yes	No	Yes	No	No	Moderate
Elmsville High	Yes	Yes	Yes[a]	No	No	Yes	Moderate
Gillepsie High	Yes	Yes	No	No	Yes	Yes	Moderate
Meribel High	Yes	Yes	No	Yes	Yes	No	Moderate
Paul Bunyan High	Yes	Yes	No	No	Yes	No	Moderate
Peregrine Hill Elementary	Yes	Yes	No	No	Yes	Yes	Moderate
Proctor Point High	Yes	No	No	No	Yes	Yes	Moderate
Rossignol Elementary	Yes	Yes	No	No	No	Yes	Moderate
Tyron Elementary	Yes	Yes	No	Yes	No	Yes	Moderate
West Marble High	Yes	Yes	No	No	No	Yes	Moderate
Coral High	Yes	No	No	No	No	No	Little/No
Melon Elementary	Yes	No	No	No	No	Yes	Little/No
Raven Ridge Elementary	Yes	No	No	No	No	Yes	Little/No
Sawbuck Elementary	Yes	No	No	No	No	Yes	Little/No
Sherbrooke Elementary	Yes	Yes	No	No	No	No	Little/No
Tyro Trail Elementary	Yes	Yes	No	No	No	No	Little/No

Source: SST respondent interviews and focus groups, spring 2012.
Notes: Includes 25 core sample schools. All school names are pseudonyms.
[a] There was disagreement between respondents in this school for this measure. The principal reported that the leadership team members are the decision makers, but an instructional coach disagreed, noting that the "principal is the one that makes the decisions. He makes the decisions, and he tells us this is what needs to happen, and we just make it happen."

Respondents at 12 of the 25 core sample schools reported structures and opportunities for a moderate level of distributed leadership during Year 2 of SIG. In most of these schools (11 of 12), respondents' perceptions of staff involvement in the decision-making process were mixed. For example, the assistant principal at one elementary school described a "shared leadership model" with some infrastructure (such as the leadership team) to support it, but other school respondents (e.g., teachers) felt that the principal was still working on sharing decision making with a wide range of staff. Although certain staff members reported that the principal made decisions with input from others and that the school had a leadership team with a clear set of responsibilities, teachers did not uniformly report that they had input into decision making at the school. However, teachers did report that they had opportunities to take on leadership roles.

Respondents at 6 of the 25 core sample schools reported few structures and opportunities for distributed leadership during Year 2 of SIG. Although each of these schools had a leadership team that included nonadministrators, respondents did not indicate that the schools had more than one other feature. According to coaches and a teacher at one such school, the leadership team's role had diminished greatly under the new principal, who replaced an interim principal at the start of the 2012–13 school year. Respondents at two other schools—teachers in one school and coaches in another—reported that the leadership team was disorganized and meetings were often canceled or irregular.

Respondents at these six schools did not perceive the principal as being collaborative or making decisions with input from teachers and other school staff. Likewise, teachers did not describe opportunities to provide input into the decision-making process. A coach at one school said, "You're to be seen and not heard." Another nonteaching staff member expressed similar feelings: "They [school leadership] hold meetings and include us but really aren't taking into consideration whatever suggestions [we make]." A teacher reported that "teacher input is not welcomed. If administration does not come up with the idea, it is not a good idea unfortunately." Only two respondents at this school, both teachers, said that the principal welcomed input, but one of those teachers immediately qualified his response by saying, "but some people think she's not open at all."

In most of the core sample schools (15 of 25), respondents reported that administrators made an effort to establish structures to support distributed leadership during the first two years of SIG. Most of these schools were categorized above as having distributed leadership (seven schools) or having a moderate level of distributed leadership (seven schools) in Year 2 of SIG. One school was categorized as having little/no distributed leadership. Although distributed leadership strategies differed by school, principals reportedly promoted distributed leadership often through the creation of new teams or committees, the addition of new staff to an existing team (e.g., the leadership team), leadership opportunities for teachers and coaches, and additional ways for school staff to provide input into the decision-making process.

In most of these cases, a new principal reportedly brought the shared leadership approach to the school. The school improvement team and school-based instructional specialist at one school described the principal, new to the school during the 2009–10 school year, as radically changing what used to be a confrontational relationship between teachers and school leadership to one of collaboration and open communication. The principal reportedly continued to develop leadership opportunities throughout his tenure, focusing on teacher-led professional learning opportunities during the 2010–11 school year. Similarly, the principal at another school reportedly brought about more distributed leadership when she started at the school during the 2009–10 school year and continued to develop capacity during the first two years of SIG. The principal said, "I wanted leadership to understand that they now needed to take on the role of building a strong staff...building capacity in leadership. We're making this decision collectively. It's no longer my decision. It's our decision."

In the remaining 10 schools, respondents reported that administrators did not develop distributed leadership during the first two years of SIG. Even though leadership was at least moderately distributed in five of these schools, respondents did not report that the principal took intentional actions to create new structures or opportunities to support distributed leadership. In the other five schools, there were few existing distributed leadership structures and no evidence of efforts to build such structures. For example, respondents described the principal at one school in 2011–12 as a top-down leader who reversed the work the interim principal had done to distribute leadership.

Chapter Summary

This chapter explored two leadership strategies that could potentially influence efforts to increase human capital in low-performing schools. The first—required by the SIG turnaround and transformation models—involved replacing principals. If the principal is replaced by someone who brings experience and expertise that is well suited to the school's needs, this mechanism has the potential to build the human capital of the school. Among the 25 core sample schools, it appears that district officials tried to hire principals with at least some relevant experience, and in half of the schools, respondents did describe the new principal as an improvement over the previous principal. We also found that in nine schools, continued leadership turnover was not infrequent, either because the first new hires proved to be a poor fit for the school or because school leaders left their positions for personal reasons or for other opportunities.

The second capacity-building approach we examined is cultivating the leadership of other staff, including teachers and other nonadministrative staff at the school. Our site visit data suggest that principals at most of the core sample schools involved their staff in several features of distributed leadership in Year 2 of SIG, such as developing a leadership team and involving them in decision making. Moreover, respondents in 15 of the 25 core sample schools described efforts to enhance distributed leadership during the first two years of SIG. Although it was beyond the scope of this study to conduct an in-depth analysis of the quality of these interactions, respondents from these schools indicated that they welcomed the opportunity for increased professional engagement and leadership opportunities.

Chapter 4: Building Human Capital Through Staffing Decisions

In the previous chapter, we examined how the 25 core sample schools strove to build human capital by replacing the principal and by distributing leadership amongst a wider range of staff. In this chapter, we examine two parallel strategies for teachers and other school personnel—namely, efforts to build human capital by (1) replacing or reassigning teachers and (2) hiring additional staff to provide various instructional or support functions in the school.

As an improvement strategy, teacher replacement rests on assumptions similar to those for principal replacement: that many individuals employed in persistently low-performing schools lack knowledge, skills, or motivation needed to dramatically alter school performance, and that replacing them with more qualified individuals is necessary for improvement. These assumptions are reflected in the SIG turnaround model, which requires schools to replace at least 50 percent of their teachers. Classroom teachers are not the only school personnel who perform essential functions. Other instructional and support staff, such as coaches, also may perform functions that are necessary for improvement. Thus, a second improvement strategy is to bring in additional staff who can provide these supports. To assist with implementing this strategy, SIG allows schools to use the grant money to fully or partially support salaries for staff members whom schools may not have otherwise been able to hire, or whom might have been otherwise laid off due to budget reductions (U.S. Department of Education, 2010).

Building a skilled and motivated staff at low-performing schools can be challenging. The school environment or district policies may make it difficult for principals to recruit and retain the personnel they need (Guarino, Santibañez, & Daley, 2006). New staff may not have greater skills, or they may be stronger in some areas (e.g., motivation) but weaker in others (e.g., pedagogical skills). Even if new hires are improvements over previous staff, large-scale changes such as those called for in the turnaround model may exacerbate existing patterns of instability and high teacher turnover. Thus, (1) how challenging the context for a school is with regard to staff recruitment and retention, (2) how supportive the district is in this area, and (3) how well school leaders are able to navigate these challenges and supports in a purposeful way to meet their unique needs or goals, are important corollaries to these two improvement strategies. We therefore also examine these three issues in this chapter.

Box 4.1. Key Chapter 4 Findings

- About half of the core sample schools (12 of 25) replaced at least 50 percent of their teachers between 2009–10 and 2011–12. Respondents at 7 of these 12 schools perceived the replacement as positive for the school, bringing new energy and improved morale.
- During the first two years of SIG, almost all schools (24 of 25) created new nonteaching positions, most often coaches (instructional, technology, data) and school administrators.
- Principals in about half of the schools (12 of 25) indicated that staffing decisions were made with specific school needs or goals in mind.
- Principals or district officials in 18 of 25 core sample schools reported that recruitment and/or retention challenges limited the school's ability to build a skilled and motivated staff. District-level conditions and policies (such as layoffs, involuntary transfers, and hiring processes that limited teacher applicant pools) were the most frequently cited recruitment or retention challenges (12 of 25 schools).
- Principals and district officials in nine schools across seven districts reported that their district provided advantages to SIG schools in the hiring process (such as the ability to screen and interview candidates before other schools) to better enable them to recruit qualified staff. Teachers in eight schools across four districts reportedly received a monetary bonus for working at the school.

Replacing Teachers

A central performance problem for some persistently low-performing schools appears to be the quality of the teaching staff (Aladjem et el., 2010; Herman et al., 2008; Max & Glazerman, 2014). If so, then replacing the staff may be necessary to enact meaningful change that cannot be achieved solely through professional learning for existing teachers. While efforts to replace teachers are not uncommon in low-performing schools (De la Torre et al., 2013), persistent staff instability over time—whether intentional or due to other factors—may be detrimental to a school (Ronfeldt, Loeb, & Wyckoff, 2013). Replacing some teachers may be perceived as necessary to realize the principal's vision for the school, but large-scale changes could be disruptive, especially when combined with leadership changes (for example, as is prescribed by the SIG turnaround model). If there are also challenges in recruiting and retaining new staff, building capacity may become even more difficult. We begin our analysis by examining the prevalence of teacher replacement in the core sample schools (see Box 4.2), and then move to the perceptions, challenges, and supports related to this improvement strategy.

About half of the core sample schools (12 of 25) replaced at least 50 percent of their teachers between 2009–10 and 2011–12. Two schools replaced their teachers one year prior to SIG (2009–10), nine schools did so in the first year of SIG (2010–11), and two schools did so in the second year of SIG (2011–12). One of these schools replaced at least 50 percent of their teachers in both Years 1 and 2 of SIG. Among these 12 schools, 9 were implementing the SIG turnaround model, which requires that at least 50 percent of the teachers be replaced.[31] The other three schools adopted the restart or

[31] Schools implementing the SIG turnaround model were required to replace at least 50 percent of their teachers in the first year of the grant. Six of the nine turnaround schools in our core sample did so in the first year. Two schools encountered a delay in receiving SIG and did not replace staff until the second year. The one remaining school replaced its teaching staff just before the first year of SIG.

transformation models, which did not require teacher replacement. The charter management organizations for the two restart schools hired entirely new teaching staffs in the first year of SIG. The principal at the one transformation school explained that he was seeking to build a teaching staff that was committed to his new school improvement goals.

Box 4.2. Teaching Staff Stability in Core Sample Schools

School classifications on teaching staff stability are based on Year 1 and 2 interview and focus group data (see Exhibit B.4 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: district administrators, principals, teachers, and instructional coaches.

Greater than half of teachers each year

- At least two respondents reported that at least 50 percent of the teaching staff was new at the beginning of both Years 1 and 2 of SIG.

Less than half of teachers in one year, and more than half of teachers in the other year

- At least two respondents reported that at least 50 percent of the teaching staff was new at the beginning of Year 1, but not Year 2, or vice versa.

Less than half of teachers each year

- At least two respondents reported that less than 50 percent of the teaching staff was new at the beginning of both Years 1 and 2 of SIG.

Perceptions of Teacher Replacement

The perceptions of school stakeholders matter in the improvement process. Attitudes about new teachers and the actions of the administration to bring them to the school are likely to influence the degree to which remaining teachers collaborate and support the new teachers, and how supportive they are of the reform effort in the school more generally. To better understand whether large-scale teacher replacement was perceived as positive for the school and its improvement trajectory, we analyzed interview data from the 11 core sample schools that implemented teacher replacement in 2010–11 or 2011–12 (see Box 4.3). Respondents shared their perceptions of the quality of new teachers, as well as their perceptions of the teacher replacement process (i.e., the rules that govern adding and removing staff, together with the extent to which principals and teachers can make decisions about staff placements).

Among the 11 schools that replaced teachers between 2010–11 and 2011–12, respondents in 7 schools (4 turnaround, 1 transformation, and 2 restart[32]) characterized the addition of new teachers as positive for the school, bringing new energy, improving morale, and creating the potential for higher teacher capacity. In three others (all turnaround), respondents characterized the teacher replacement as neutral, just "another instance of change." For the one remaining turnaround school, respondents indicated that the teacher replacement process was demoralizing and aggravated problems for the school (Le Floch et al., 2014).

[32] At the two restart schools, all teachers, including the ones interviewed for this study, were new to the school at the time of data collection. These teachers could not speak to the previous year or change from the previous year, but they were able to speak to their perceptions of the quality of the school's current staff.

Box 4.3. Perceptions of the Teacher Replacement Process

School classifications on perceptions of the teacher replacement process are based on interview and focus group data in Year 1 for nine schools (Le Floch et al., 2014) and in Year 2 for two additional schools that replaced their teachers in the second year of SIG (see Exhibit B.5 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups (excluding newly hired staff): district administrators, principals, and teachers.

Positive

- At least three respondents indicated that the new teachers introduced as part of the replacement process were beneficial (i.e., "bringing new energy," improving staff morale, increasing teacher quality); AND
- No respondent described the teacher replacement in terms such as "biased" or "unfair."

Neutral

- Respondents did not comment on the quality of the teacher replacement process or the quality of new teachers, or described the process in neutral terms, such as "another instance of change."

Negative

- At least three respondents indicated that the new teachers introduced as part of the replacement process were detrimental to the school (i.e., weakening staff morale, decreasing teacher quality); OR
- At least three respondents described the teacher replacement process in terms such as "biased" or "unfair."

In one school implementing the turnaround model where the replacement process, which was delayed until 2011–12, was categorized as "positive," the principal explained that the school looked for new teachers with the "right mindset" and the ability to set "high expectations for students." Hiring experienced staff was another priority according to the principal, who explained that all new teachers in 2011–12 brought three to five years of teaching experience. He expected that with this new staff, the school's data would "speak for itself," and that on balance, the experience had "absolutely" been positive. Three out of four teachers interviewed echoed his comments, saying, for instance, that new teachers "really want to make a change and be here." Similarly, respondents at another turnaround school reported that bringing in new teachers was beneficial to the school, like a "rebirth." At a third school, the principal, teachers, instructional coaches, and parents universally characterized the new teachers as motivated and skilled, and indicated that the new teachers improved the school climate and instructional quality.

In contrast, respondents at another turnaround school that replaced teachers in 2011–12 appeared to have mixed perceptions about the change. Few respondents at this school offered comments about the teacher replacement process but had more to say about the quality of the new teachers. One instructional coach felt that the new staff were helping to "change the culture of the school" and were "more willing to examine their own instructional practice." However, the principal spoke less positively about the capacity of the teachers (both new and existing). The other two schools where respondents expressed neutral sentiments overall (both of which replaced teachers in 2010–11) were located in a district where schools implementing the turnaround model reportedly replaced staff by shuffling existing teachers around to different schools—a process referred to as a "lemon dance." In this district,

principals reportedly selected new teachers from an applicant pool that included teachers who had been removed or voluntarily transferred from other schools in the district.

Finally, respondents at one turnaround school that replaced teachers in 2010–11 described the process as "demoralizing." Although new Teach for America teachers who had been added were perceived as being "bright and motivated," the process of identifying teachers to be replaced was perceived as biased. Teachers described classroom observations as subjective, and staff had mixed views about the resulting group dynamic among new and returning staff. Here, the replacement process was reportedly conducted in a "toxic" manner that may have limited efforts to build human capital.

Creating Nonteaching Positions

As an improvement strategy, creating new nonteaching positions could help build human capital in a few ways. It may free teachers from responsibilities that they otherwise would have to take on and allows them to focus their attention more on tasks directly related to instructing their students. It may allow the school to do additional kinds of capacity-building work—for example, coordinating partnerships with community groups or educating parents. It may also be a way to provide teachers with targeted, capacity-building support for their instruction—for example, hiring English language learner coaches and subject-matter coaches. Although funding positions with soft money might pose risks for sustainability, schools could potentially seek other funding to maintain newly-added staff.

Most core sample schools (24 of 25) reported creating new nonteaching positions at some point during the first two years of SIG.[33] About half of the schools (13) reported adding new nonteaching positions in both years. The remaining 11 schools reported adding new nonteaching positions in only one year (2010–11 or 2011–12). Schools that added new nonteaching positions in either year may or may not have continued that position in later years. The types of positions added varied by school with coach positions—including instructional coaches, data coaches, and technology coaches—being the most commonly reported (14 schools). Respondents frequently reported that these positions were added to build the skills of teachers in content and pedagogy. For example, one school reported adding four new coaches during the first year of the grant (2010–11). The principal explained that he told the district that he needed full-time "in-house" coaches to be successful. He reported that these coaches built capacity by working with teachers and planning strategies for meeting school goals. At another school, the principal explained that although a technology coach position was not originally in the SIG budget, he used money originally allocated for a curriculum coach to hire a part-time coach for the 2011–12 school year to build the technological skills of school staff. The principal said it was a "huge need" because "professional development on technology is really lacking." A member of the school's governance board agreed, commenting that "[the technology in classrooms] is not being utilized correctly."

Respondents at 11 schools also reported adding new administrators, such as assistant principals. At one school, long-term temporary administrators were assigned to work at the school both to receive training on how to become effective school administrators and to support the school principal in carrying out his goals. After filling one of these temporary positions, educators would be given permanent assistant principal positions at other schools within the district. Other schools also added other nonteaching positions, including parent or community liaisons, social workers, and technology coordinators. For

[33] Identified new nonteaching positions are those reported by at least one of the following respondents: district administrator, principal, teacher, instructional coach, or school improvement team member (see Exhibit B.6 for more detail on the analytic procedures).

example, the principal at one school decided to use some of his SIG funding to add a full-time parent liaison to the school staff. He justified this position by explaining that the liaison worked closely with parents to help them learn English. Doing so, he argued, improved kindergarten readiness at his school. In another district, SIG schools reported hiring community liaisons to coordinate activities and build relationships with parents and community-based organizations.

Respondents indicated that SIG was often used to fully or partially support the salaries of staff, whom schools may not have otherwise hired or whom would have been otherwise laid off as a result of budget cuts. At one school, the district used SIG to hire a social worker to focus on the needs of the school's homeless student population. According to respondents, this position would not have been possible without SIG.

Purposeful Approaches to Staffing: Addressing School Needs or Goals

We hypothesize that staffing changes such as those previously discussed in this chapter are most likely to build human capital when they address identified school needs or goals. If principals can identify school needs and meet those needs by strategically hiring new staff or adapting the responsibilities of existing staff, then these staffing efforts may be more likely to contribute to school improvement. Using qualitative data from 2011–12,[34] we examine the extent to which principals in our core sample schools were able to implement staffing strategies in a purposeful manner; that is, one in which principals provided evidence of a pattern of intentional decisions related to hiring new staff or making changes to the roles and responsibilities of existing staff that aligned with specific school needs or goals. Our analyses take into consideration the broader district context that may limit a school leader's ability to implement desired changes related to hiring and firing staff. Principals who were aware of these district limitations but still proactive in their efforts to adopt purposeful staffing strategies to the extent possible were classified as being purposeful (see Box 4.4).

Box 4.4. Principal's Approach to Staffing Decisions in Core Sample Schools

School classifications on the purposefulness of the principal's staffing approach are based on Year 2 principal interview data (see Exhibit B.7 for more detail on the analytic procedures). Data from other school-level respondents, including teachers and instructional coaches, provided details about the principal's approach to staffing decisions.

Purposeful approach to staffing decisions

- The principal clearly articulated how staffing decisions addressed school goals or needs (e.g., removing a teacher due to poor performance and replacing her with someone with the "right" skill set and strong motivation, or reassigning teachers to different grades to better align their skills to students' needs; creating an additional instructional coach position to give teachers "the support that they need").

[34] These analyses rely primarily on Year 2 interview and focus group data (2011–12), which incorporated questions specifically about capacity-building efforts at the school and district levels. In cases where we had additional data on this topic from 2010–11, we included it. In 2010–11, interviews and focus groups concentrated on identifying each core sample school's performance problem as well as how SIG money would be used to drive school improvement; these discussions sometimes included data on staffing strategies.

Box 4.4. Principal's Approach to Staffing Decisions in Core Sample Schools

(continued from previous page)

No evidence of purposeful approach to staffing decisions

- The principal clearly articulated how staffing decisions were not aligned with school goals or needs (e.g., accepting low-quality teachers due to district mandate); OR
- The principal did not provide any evidence on how staffing decisions addressed school goals or needs (e.g., replacing teachers leaving for personal reasons such as retirement or relocation).

Principals at about half of the core sample schools (12 of 25) provided evidence of a purposeful approach to staffing. For example, the principal at one of these schools explained that second-grade achievement gains "were so low" that she had to do something about it. She attributed these low scores to a second-grade teacher near retirement. To address the inadequate instruction provided by this teacher, the principal reorganized her existing teachers by moving two first-grade intervention teachers into the second-grade instruction positions, a decision she felt would strengthen the quality of teaching in that grade. She also moved the problematic second-grade teacher to a third-grade teaching position because he had more experience teaching third grade. She then explained how she used the district's mentor review and collaborative process to try to improve the teacher's instruction. Ultimately, the principal was able to counsel the struggling teacher into retirement midway through the year and hire someone she perceived to be of higher quality. To accomplish these staffing changes, the principal worked with district administrators who supported her staffing plan, but union agreements limited their ability to remove low-performing teachers quickly. While the district worked to establish a memorandum of understanding to facilitate easier staffing changes at SIG schools, the principal created and implemented purposeful strategies to minimize the impact of less effective staff.

At another school, the district was also open to working with the principal as she tried to execute her desired staffing strategies. Here, as in most districts, existing policies place some limits on schools with respect to staffing. One district administrator explained that the balance between existing policies and exceptions for SIG schools is "always being renegotiated." Working within this context, the principal interpreted data on student behavior to identify weak instructors. "When we looked at our behavior data and our spikes, we knew it. It was our elective teachers." The principal removed those teachers, including an art teacher and a music teacher, and replaced the art teacher with a science teacher because of the school's STEM (science, technology, engineering, mathematics) focus. She also capitalized on many of the existing teachers' probationary status to remove and replace them with "rock stars" whom she personally assessed and recruited.

At some core sample schools, however, the district context reportedly created many more limitations on principals' abilities to implement staffing strategies. Principals in these schools may have had purposeful approaches to staffing but found it very difficult to implement them. At one such school, district budget cuts were greatly affecting the school. The principal explained, "If I don't have the SIG grant, I'm very concerned about the sustainability of my school.... Without that…I wouldn't be able to have enough teachers to teach. So I've been very forthright with the district to say this is a problem." He went on to describe additional outcomes of the budget crisis, including that the instructional coaches he hired were forced to provide direct instruction as classroom teachers for parts of each day, thereby limiting their availability to work with teachers. Despite these constraints, this principal was still able to implement some of his desired staffing changes. For example, he terminated several staff members during the year

because of poor performance. His assistant principal confirmed that they had "moved [a] tremendous amount of people out" who were not the right fit for the building.

Principals at the remaining 13 schools did not provide evidence of a purposeful approach to staffing. Some of these principals described district policies that limited their ability to make intentional staffing decisions, as was the case with some of the schools previously discussed. However, unlike those schools, principals at these schools seemed unable to execute purposeful staffing strategies within such a constrained environment. For example, the principal at one school reported a staffing environment that did not address school needs: District layoffs in 2011–12 reportedly caused the school to lose quality teachers, and the school has historically had to hire teachers who were "left over" in the applicant pool because teachers prefer to work at higher-performing schools. This principal did not describe trying to maximize the staff to best support the students, nor did he describe any efforts to remove these undesirable hires.

Principals from other schools in this category did not describe a need to change staff. For example, one principal indicated that the applicant pool was full of "really qualified people," adding that the school retained more than 90 percent of its staff from the prior year. Although he did not provide evidence of an intentional approach, he also did not report a need for changes to the school's staffing strategy.

Perceived Recruitment and Retention Challenges

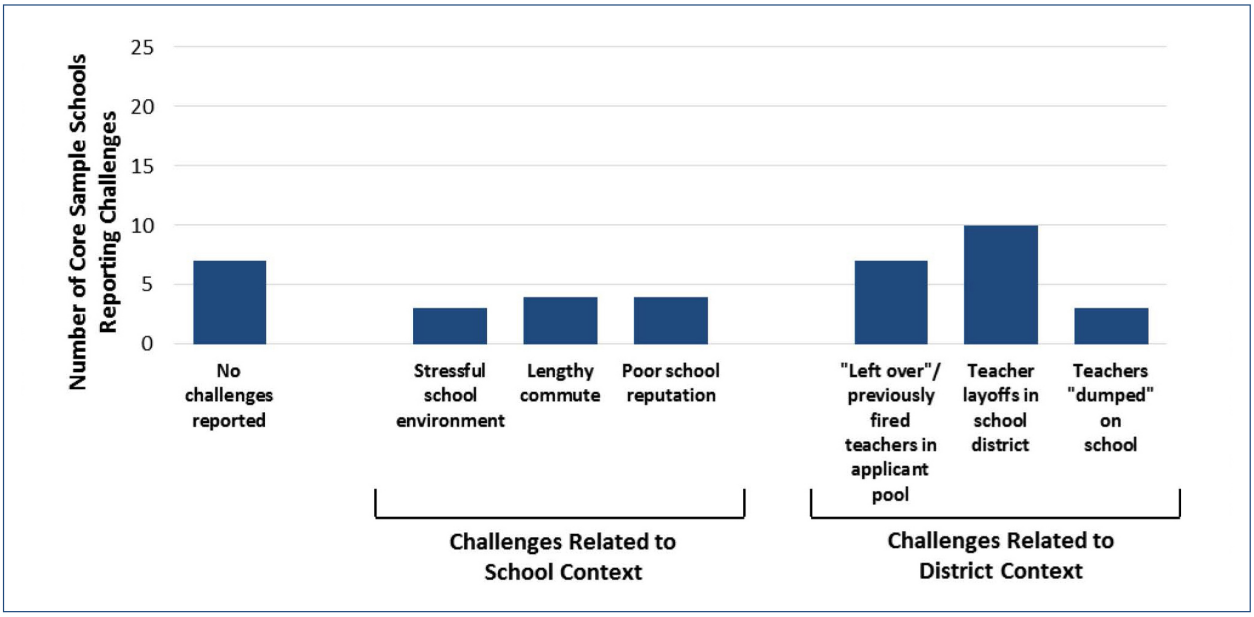
Respondents in our core sample schools reported various challenges in trying to recruit and retain a stable group of skilled and motivated staff. Their recruitment and retention challenges are consistent with those identified in existing research, such as difficult work environments (Barry, Raspberry, & Williams, 2007), stringent district hiring policies (Wayne et al., 2011), and rural settings (Rosenberg et al., 2014). For example, our site visit data reveal that when replacing teachers, many principals reported being unable to request the departure of specific teachers. Union contracts required that principals ask for voluntary transfers, and if more transfers were required, the teachers with the lowest seniority, irrespective of quality, were transferred to other schools.

Perceived teacher retention and recruitment challenges are defined as those for which the principal and/or a district administrator described associated challenges based on Year 2 interview data (see Exhibit B.8 for more detail on the analytic procedures).[35] Exhibit 4.1 identifies perceived teacher recruitment and retention challenges across the 25 core sample schools. Although this analysis focuses on teacher recruitment and retention, some of the same challenges likely apply to the recruitment and retention of other types of staff as well (e.g., coaches, administrators).

Overall, we found that school respondents reported facing a number of recruitment and retention challenges in 2011–12. Conditions associated with the district context, such as widespread teacher layoffs and policies that required SIG schools to staff specific positions occupied by previously-removed teachers rather than have the flexibility to choose teachers independently, were most frequently discussed by respondents.

[35] Although we recognize that many of the challenges identified by respondents may not be unique to this time frame, we included teacher recruitment and retention as a key focus of Year 2 data collection efforts. Challenges related to recruitment and retention raised by respondents in Year 1 were identified and taken into consideration as site visitors prepared for Year 2 site visits.

Exhibit 4.1.
Perceived Teacher Recruitment and Retention Challenges, 2011–12



Source: SST respondent interviews and focus groups, spring 2012.
Notes: Includes 25 core sample schools. Categories are not mutually exclusive, except for *No challenges reported*.

Principals and district officials at 18 of 25 core sample schools reported that recruitment or retention challenges limited the school's ability to build a skilled and motivated staff. Teacher recruitment (but not retention) was reported as a challenge at 3 of these schools, teacher retention (but not recruitment) at 11 schools, and both teacher recruitment and retention at 4 schools.

Principals and district officials at 12 of these 18 schools reported that district conditions contributed to staffing challenges. These conditions included districtwide budget cuts and layoffs, limits on the pool of teachers from which principals could hire, and involuntary transfer procedures. Principals and district officials at 10 of these 12 schools reported that districtwide budgetary constraints forced teacher layoffs. Teachers were reportedly "pink slipped" even when school administrators preferred to keep them. For instance, respondents at one school indicated that several newer teachers (many of whom had started during the first year of SIG) lost their positions in Year 2 as a result of districtwide teacher layoffs. The principal explained that two and a half weeks before school started, the school lost 24 staff members, including "a lot of people that truly wanted to be here and that had built relationships with the children."

Principals and district officials at 7 of these 12 schools reported that the district's applicant pool included teachers who had been removed from other schools, or those who were "left over" among the teachers not yet hired by other schools. The principal and external provider at one such school described recruiting "competent" teachers as a challenge. The principal explained:

> *Yes, we were given the opportunity to hire people, but the people come off of a list, and the list may not necessarily have the best candidates. Also, when you look at the teaching staff, there's no flexibility at all. You can't bring anyone in from outside the district. And who you're interviewing off that placement list are people that need to be placed, and they need to be placed because they have been displaced from someplace else that didn't want them in their*

place. And 9 times out of 10, I don't want them in my place either.... We are moving the same incompetent people around to different schools.

Principals and district officials at 3 of these 12 schools reported that they had no choice but to accept teachers who had been involuntarily transferred to the school. The principal at one such school explained that he received an involuntary transfer who was not wanted in any school in the district. This teacher was described as "a bad teacher" who had been disruptive at another school in the district and was a "toxic" influence.

Of these 12 schools with reported district-level challenges, 2 also reported that the district took actions to help schools overcome these challenges. The principal at one such school explained that although schools in the district are required to hire from a pool of teachers laid off from other schools in the district, SIG schools are able to interview teachers from the pool, rather than having "to take the next person off the layoff list." A district respondent for another one of these schools indicated that SIG schools are given preference in external hiring and protected from administrative transfers, to the extent possible. The principal confirmed that he is given the opportunity to hire externally before other non-SIG principals, although he did also report that other district staffing policies posed challenges for the school.

Principals and district officials at 7 of the 18 schools with recruitment or retention challenges reported that school-level constraints—such as poor school reputation, stressful school environment, or long commutes to school—contributed to the challenges. Principals and district officials at four of these schools reported that the school's reputation contributed to challenges attracting and retaining staff. For example, one of the principals noted that the school's reputation as a "tough school" made recruiting staff challenging, explaining that people who are not familiar with the school are afraid to work there.

Principals and district officials at three schools reported that a stressful school environment contributed to challenges attracting and retaining teachers. The principal at one such school reported that the students in third grade were very difficult, a perception supported by the school's teachers and coaches. Teachers explained that, as a result, the school struggled to keep third-grade teachers for even one full school year, and that the school had lost seven third-grade teachers in the middle of 2011–12.

Principals and district officials at four schools reported that teachers' long commutes to school contributed to challenges attracting and retaining teachers. The principal at one such school noted that the remote location made the drive "brutal," a sentiment that was echoed by teachers, the district official, the external provider, and the union representative.

Principals and district officials at 7 of the 25 core sample schools indicated that neither recruitment nor retention presented a challenge for the school in 2011–12. These schools appeared to have stable teaching staffs that year. Principals in these schools reported that fewer than 10 percent of teachers were new to the school in 2011–12. Two of them had replaced 50 percent or more of their teachers in 2010–11. Both of these schools were implementing the restart model under SIG and replaced all staff when they were handed to charter management organizations in the first year of SIG. The principals at these schools reported successfully retaining the majority of their new teachers, limiting the need for recruitment in 2011–12.

Four of the seven schools without reported recruitment or retention challenges in 2011–12 received "high" ratings in 2010–11 on our organizational capacity measure, which included components related to teacher collaboration, safe and orderly environment, and teacher-teacher trust. These components of organizational capacity could improve a school's ability to retain existing staff, thus reducing the need to recruit new staff (Le Floch et al., 2014). For example, one of these schools reportedly had a stable staff

between 2010–11 and 2011–12 (less than 10 percent teacher turnover), and the principal reported no trouble with recruitment, explaining, "We've been having really good results with people applying to positions from all over. We've had a great applicant pool. It's been really positive; really qualified people want to work with us." This school is situated in a "benign" context, and school respondents described the culture of the school in positive ways. In addition, the school is located in a state where layoffs have occurred consistently for the past few years, so many teachers were reportedly eager to find work. All three factors could explain why the applicant pool at this school has been strong and plentiful. Similarly, the principal and district officials at another school reported that a weak economy meant that teachers who had jobs wanted to keep them, and that lots of people competed for any available jobs. There were always numerous applicants for open positions at the school, according to the district administrators, union representative, and principal.

Structures to Support Staff Recruitment and Retention

Research has identified a variety of structures that can be used to support teacher recruitment and retention (Guarino, Santibañez, & Daley, 2006). In this section, we describe how districts were using specific organizational structures to address recruitment and retention challenges reported by core sample schools. Identified supports are defined as those described by the principal and/or a district administrator based on Year 2 interview data (see Exhibit B.9 for more detail on analytic procedures).[36]

Principals and district officials in nine schools across seven districts reported that their districts provided advantages to SIG schools in the hiring process to better enable them to recruit qualified staff. For example, one district official explained (and was corroborated by one of the school principals) that SIG schools did not receive forced-transfer teachers in core subject areas. A district official in another district reported that principals of Title I schools (including the one in our core sample) were able to screen and interview candidates for open positions before other schools in the district. These types of advantages may have helped schools secure the caliber of staff they needed to enhance their ability to address the needs of their students.

Teachers in eight schools across four districts reportedly received a monetary bonus for working at the school.[37] The decision to provide bonuses using SIG was driven by the principal in one of these eight schools. In the other seven—which were situated in three districts—the bonuses were part of a district initiative. In one of these districts, SIG was used to provide bonuses for teachers in all SIG schools. The other two districts had established bonuses, unrelated to SIG, for teachers in a set of low-performing schools that included some SIG schools. Some bonuses were paid as signing bonuses, and others were paid at intervals throughout teachers' tenure at the school. For example, teachers at a set of low-performing schools in one district received bonuses at the end of their first year, fourth year, and sixth year teaching at the school.

Principals in two schools reported extra supports for teachers to alleviate the expense of their long commutes to the school. One provided a gas stipend to teachers teaching in the remote community, and the other provided a van service from the communities in which teachers live to the school.

[36] Although we systematically collected information about these supports from respondents in Year 2, the supports they described were not necessarily new in Year 2 of SIG implementation.

[37] Other types of monetary benefits, such as performance-based incentives paid if certain student improvement goals are met and extra pay for working during extended hours or participating in additional professional learning opportunities, were not included in this analysis.

Chapter Summary

Replacing teachers and adding new nonteaching positions are examples of staffing strategies schools may pursue in an effort to build human capital. All 25 core sample schools reported using some combination of these strategies to change the composition of their staff during the first two years of SIG. Specifically, 12 of the 25 core sample schools replaced at least half of their teachers, and 24 of the 25 schools created new positions for nonteaching staff, such as administrators or instructional coaches. Some of these staff changes were perceived to build human capital, while others were perceived as creating "too much turnover."

At 12 of our 25 core sample schools, principals provided evidence of a purposeful approach to staffing in 2011–12. These principals reported being able to develop strategies that enabled the hiring of new nonteaching staff members or the replacement of old teachers in a manner that aligned with the school's overall needs and goals. District conditions and policies played a role in either supporting or challenging the schools' ability to recruit and retain teachers. Some districts reported creating systems and structures that facilitated hiring in SIG schools, for example, by providing monetary incentives for teachers who work at SIG schools. However, among the 18 core sample schools where the principal or district official reported difficulties in recruiting or retaining high-quality teachers in 2011–12, most described district conditions (e.g., budget cuts resulting in layoffs) or policies (e.g., limiting the teacher hiring pool) that hindered recruitment or retention efforts.

Overall, the evidence from our core sample schools suggests that requiring the large-scale replacement of teachers over a short time period in low-performing schools (as is the case with the SIG turnaround model) may not be straightforward. Wholesale staffing changes may be necessary in schools with a dysfunctional or "toxic" culture or climate, but the changes are by nature disruptive. Whether such disruption will likely enhance human capital depends in part on schools' ability to recruit or retain the teachers that best "fit" with school needs. This in turn will depend on how able principals are to identify their school needs, how able they are to identify and remove teachers who are a poor fit, how qualified the teacher applicant pool is, and how much flexibility the principal has to hire teachers from the applicant pool. Our data suggest that a principal's own capacity and district policies may be important contextual factors that help determine what effects such requirements ultimately have in these low-performing schools.

Chapter 5: Building Human Capital Through Teacher Professional Learning

Professional learning aims to build teachers' knowledge and skills and subsequently improve student outcomes. The SIG transformation and turnaround models require districts to provide their SIG schools with "ongoing, high-quality, job-embedded professional development that is aligned with the school's comprehensive instructional program and designed with school staff to ensure they are equipped to facilitate effective teaching and learning and have the capacity to successfully implement school reform strategies" (U.S. Department of Education, 2010, p. 36). Increasing professional learning opportunities was the most common improvement strategy reported in our core sample schools during the first year of SIG (Le Floch et al., 2014), and is consistently cited as an improvement strategy in low-performing schools more generally (Opfer & Pedder, 2011).

While there is limited rigorous evidence demonstrating the effects of professional development (PD) on teacher and student outcomes (Campbell & Malkus, 2011; Garet et al., 2008; Garet et al., 2010; National Mathematics Advisory Panel, 2008; Wayne et al., 2008; Yoon et al., 2007), there are numerous theoretical frameworks and related suggestive evidence identifying desirable features of PD. These features include having a substantial number of PD hours (Desimone, 2009; Garet et al., 2001; Porter et al., 2003) and sustaining professional learning activities over a period of time rather than implementing them sporadically (Hawley & Valli, 1999; Opfer & Pedder, 2011). These basic features facilitate a stronger environment for professional learning that can focus deeply on content (Darling-Hammond et al., 2009; Kennedy, 1998); make connections with district and school improvement goals (Desimone et al., 2002a; Elmore, 1997); provide opportunities for teacher-centered "active learning" (Bransford, Brown, & Cocking, 2000); and create opportunities for teachers from the same school, department, or grade-level to learn collectively (Birman et al., 2000; Desimone, 2009; Desimone et al., 2002b; Garet et al., 2001). For example, professional learning communities—ongoing, knowledge-centered communities of practice—could potentially improve teacher knowledge, self-efficacy, and positive views of the school through processes of collective learning, decision making, and collaboration (DuFour, 2004a; Olivier & Hipp, 2006; Stoll et al., 2006).

In this chapter, we examine a few of these features of professional learning in the context of the 25 core sample schools. First, we document the number of professional learning hours in which teachers reported participating. Second, we discuss the degree to which professional learning opportunities appeared to be purposeful or tied to school goals. Third, we examine the extent to which schools took steps to provide teachers with the opportunity to participate in job-embedded learning activities. Fourth, we examine the schools' efforts to establish structures that support teacher learning opportunities, such as strategies to foster collaboration among staff and structures designed to help teachers use data to identify student needs and differentiate instruction. Finally, we examine whether teachers reported changing their practices based on participating in professional learning opportunities.

Box 5.1. Key Chapter 5 Findings

- Teachers' reported participation in professional learning opportunities during Year 2 of SIG (2011–12) varied across and within schools. The median number of hours in each core sample school ranged from 0 to 187, while the difference between the 25th and 75th percentiles within each school ranged from 36 to 158 hours.
- More teachers reported participating in professional learning focused on math, literacy, and data use than on English language learner instruction, special education, or classroom management.
- Principals and teachers in 6 of the 25 core sample schools articulated connections between professional learning activities and the school's goals or needs.
- Teachers in most of the core sample schools (15 of 25) on average reported spending a larger proportion of hours in job-embedded professional learning activities (e.g., classroom coaching, structured common planning time, meetings with mentors, consultation with outside experts, observations of classroom practice) than in more traditional activities (e.g., workshops, conferences).
- Interview respondents in most core sample schools reported developing organizational structures and systems to support teacher collaboration (16 of 25) and data use (19 of 25) during the first two years of SIG.
- In 17 of 21 core sample schools with sufficient data, most teachers reported learning and changing their practice after participating in professional learning on math, literacy, or data use.

Teachers' Participation in Professional Learning Opportunities

A nationally representative study of teacher quality under the No Child Left Behind Act reported that teachers in Title I schools identified for improvement participated in an average of 111 hours of professional learning per academic year, including the summer, across any topic (Taylor et al., 2010). Other studies suggest that receipt of a substantial amount of PD—an average of 49 hours—on particular topics or strategies is associated with a 21 percentile point boost to student achievement (Yoon et al., 2007). Because these two findings are based on a similarly broad and inclusive definition of professional learning used in our study, they offer useful benchmarks for our findings.

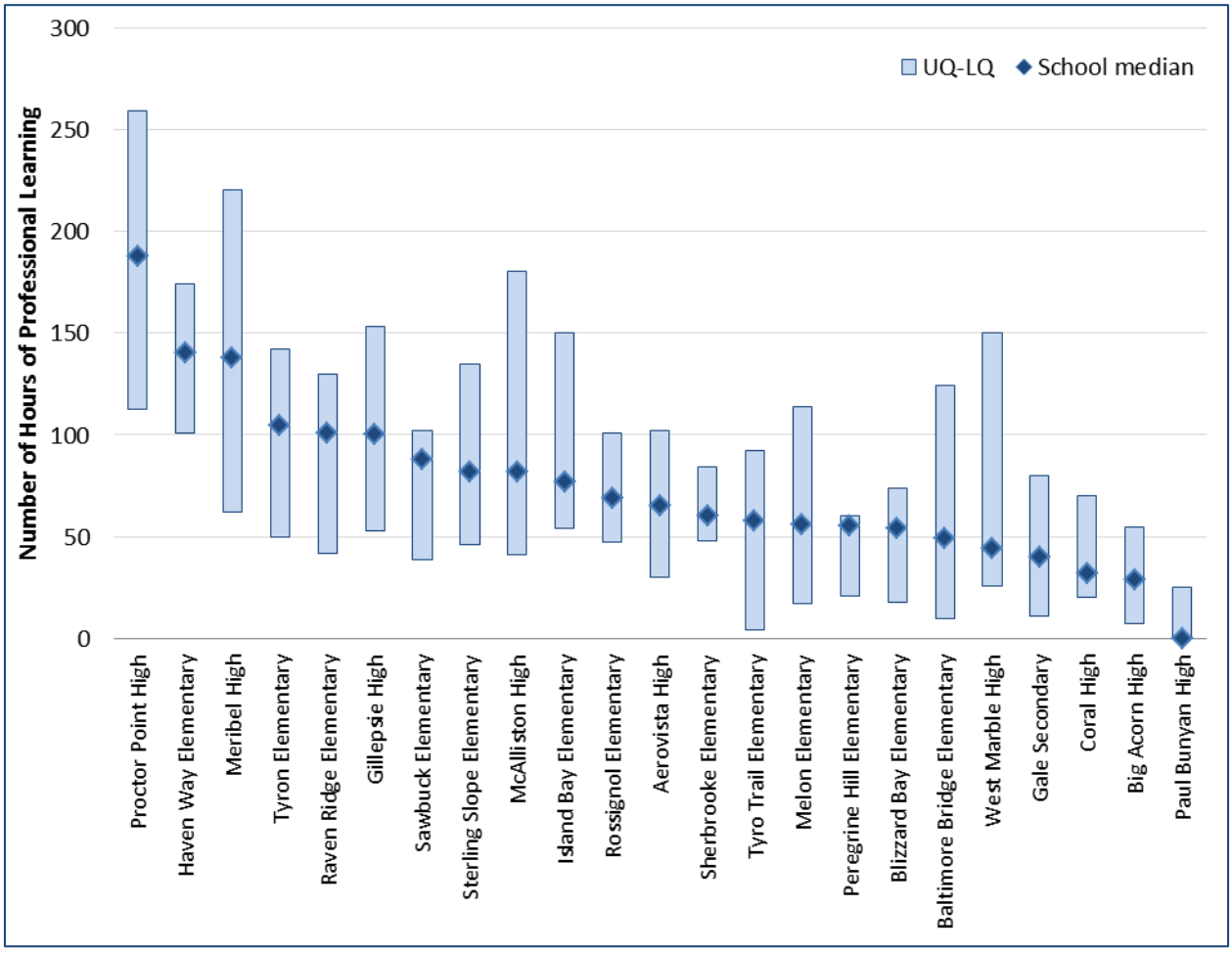
Our core sample schools varied in the median number of professional learning hours reported by their teachers, ranging from 0 hours to 187 hours (see Exhibit 5.1). In 21 of the 23 schools with sufficient teacher survey data in spring 2012, at least 80 percent of teachers reported participating in at least some professional learning activities during the 2011–12 academic year. In 5 of these 21 schools, 100 percent of teachers reported participating in professional learning activities. In one core sample school, most teachers reported participating in *no* professional learning.

The amount of professional learning hours reported by teachers also varied *within* each of our core sample schools, with the difference between the 25th and 75th percentiles[38] within each school ranging from 36 to 158 hours (see Exhibit 5.1). For example, teachers at Meribel High reported a wide

[38] This is the interquartile range, a measure of the range between the upper quartile (the 75th percentile of reported PD hours) and the lower quartile (the 25th percentile of reported PD hours).

range of professional learning hours, with the 75th percentile corresponding to 220 hours and the 25th percentile corresponding to 62 hours. In contrast, teachers at Peregrine Elementary reported an upper quartile value of 60 hours and a lower quartile value of 21 hours.

Exhibit 5.1.
Number of Teacher-Reported Hours of Professional Learning in 2011–12, by Core Sample School



Source: SST teacher survey, spring 2012
Notes: Includes 23 of 25 core sample schools (*N* = 810 teachers). Two schools were excluded from this analysis because they did not meet the 50 percent response rate threshold on the teacher survey. All school names are pseudonyms. UQ = upper quartile; LQ = lower quartile.

To provide some context for these survey findings, we present some examples from our qualitative interview and focus group data. These examples are not meant to definitively explain the variation in teachers' reported professional learning hours. They are meant to exemplify the types of school and district contexts within which teachers were situated that could be contributing to the variation in teachers' professional learning.

For example, at one high school with high median levels of reported professional learning, but also a large interquartile range, teachers who participated in interviews and focus groups reported a number

of different opportunities to participate in workshops on topics ranging from behavior management program trainings to workshops on "how to work well with ELLs." The principal and instructional coach explained that some of these workshops were district led, and others were funded at the school level. Teachers also described job-embedded professional learning activities that occurred during weekly staff meetings. One focus group teacher characterized the content of these activities as "ideas that I can implement in the classroom" immediately, as opposed to new lesson plans to integrate in the future. Teachers reported that some professional learning activities were departmentally focused so teachers' experiences were likely to vary by department. For example, the participants in a focus group of English teachers described professional learning community (PLC) activities that were focused on literacy instruction and data use, but teachers in other groups did not explicitly identify PLC activities.

At another school with high median levels of reported professional learning but a smaller interquartile range, teachers who participated in interviews and focus groups reported participating in workshops on new curriculum and instructional strategies, as well as data use and data-driven instruction. In contrast to the large comprehensive high school discussed in the previous paragraph, this school is a small elementary school. The school's faculty was not spread across departments. The principal explained that she carefully selected the professional learning activities to ensure that her teachers were all receiving training on the programs that she expected them to be implementing in their classrooms and that they were not overwhelmed by too many strategies at one time. She also spoke about her regular visits to the classroom to ensure that skills taught during professional learning were transferred to daily instruction. The majority of interviewed teachers confirmed that they participated in professional learning and received classroom visits from the principal. The principal's narrow focus and regular follow-up (along with a smaller faculty numbering about 15 teachers) may have helped reduce the level of variation in teacher participation within this particular school.

More teachers reported participating in professional learning on math, literacy, and data use than on ELL instruction, special education, or classroom management. In addition to examining the total number of professional learning hours, our teacher survey also asked respondents to identify how their professional learning hours were spread across six topic areas (see Exhibit 5.2). In analyzing the survey data, we separated high school teachers from elementary school teachers because high school teachers generally participate in professional learning related to their subject area, whereas elementary school teachers are generally multidisciplinary and may participate in professional learning activities spanning a number of subject areas. In both high schools and elementary schools, the most common topics were math and literacy instructional strategies and data use.

Exhibit 5.2.
Percentage of Teachers Reporting Participating in Professional Learning, by Topic, 2011–12

Topic	Percentage of Elementary School Teachers Reporting Participating in Professional Learning	Percentage of High School Teachers Reporting Participating in Professional Learning
Teaching students with disabilities	31.4%	43.8%
Teaching English language learners	41.3%	44.2%
Classroom management	44.2%	45.2%
Mathematics instructional strategies	61.8%	78.2%
Literacy instructional strategies	77.0%	84.3%
Data use	80.2%	62.2%

Source: SST teacher survey, spring 2012.
Notes: Includes 23 of 25 core sample schools (*N* = 794 teachers). At the high school level, the percentage of teachers reporting participation in "mathematics instructional activities" includes only self-identified mathematics teachers, and the percentage of teachers reporting participation in "literacy instructional strategies" includes only self-identified English language arts teachers. Two schools were excluded from this analysis because they did not meet the 50 percent response rate threshold on the teacher survey. Professional learning hours categorized as "other" were excluded from this analysis.

Professional Learning That Addresses School Goals and Needs

Surveys of teachers have identified a number of features of professional learning opportunities associated with the likelihood that teachers will report learning new knowledge and skills, and changing their practice. These features include how coherent the PD is with a wider set of opportunities for learning and development (Garet et al., 2001). One aspect of coherence is the extent to which professional learning addresses school needs or goals, which may be associated with an increase in overall school capacity (Beaver & Weinbaum, 2012; Elmore, 1997; Garet et al., 2001; Newmann, King, & Youngs, 2000). We thus assessed whether respondents perceived their school's professional learning opportunities as being tied to school needs. This analysis relies on site visit data from district administrators, principals, coaches, and teachers in Year 2 of SIG (2011–12) (see Box 5.2 for more information on our analytic approach).

In six of the core sample schools, respondents felt that their professional learning was aligned with school needs and goals. For example, the principal at one elementary school reported that professional learning opportunities were developed to respond to perceived deficits in the school's teaching capacity. An instructional coach and the principal both noted that prior to the start of the 2011–12 school year, they examined student data to assess the needs of the students and to identify areas of potential weakness. In addition, the coach met with teachers individually to examine each teacher's classroom data and to identify where students were struggling. From this work, the coach detected a need for students to improve their reading fluency skills and developed professional learning opportunities for the teachers to improve their instruction in this area.

Likewise, the principal at another elementary school described a professional learning plan that was created to address both teacher needs and perceived student needs. The teachers participated in established PLCs in which they focused on inquiry-based instruction. To continue the work that the teachers accomplished in small groups, the principal established a series of peer-to-peer observations. Each teacher was observed three times during the year, each time by another teacher or staff member. The coach described it as "being paired with peers and going in and having the chance to individually

grow with the support of a peer." Teachers described the feedback regarding their strengths and weaknesses as helpful in developing their knowledge and skills.

Box 5.2. Perceptions of Alignment Between Professional Learning Opportunities and School Goals and Needs in Core Sample Schools

School classifications on the alignment between professional learning opportunities and school needs are based on Year 2 interview and focus group data (see Exhibit B.10 for more detail on the analytic procedures). For this analysis, *respondents* come from the following respondent groups: district administrators, principals, teachers, instructional coaches, and external support providers.

Aligned

- At least one respondent in an administrative or support role (e.g., district administrator, principal, instructional coach, external support provider) and at least two teachers described professional learning opportunities, as a whole, as focused on the goals or needs of the school; AND
- Not more than one respondent explicitly described the professional learning opportunities, as a whole, as *not* focused on the goals or needs of the school.

Moderately aligned

- At least one respondent (but fewer than one administrator and two teachers) described the professional learning opportunities as focused on the goals and needs of the school, AND no respondent explicitly described the professional learning opportunities as *not* focused on the goals or needs of the school; OR
- At least two respondents described professional learning as a mix of opportunities, some that were focused on the goals or needs of the school and some that were not; OR
- Respondents disagreed about the extent to which professional learning opportunities, as a whole, are focused on the goals or needs of the school.

Minimally or not aligned

- Not more than one respondent described the professional learning opportunities, on the whole, as focused on the goals or needs of the school, AND at least two respondents explicitly described the professional learning as *not* focused on the needs of the school; OR
- Not more than one respondent described the professional learning opportunities, on the whole, as focused on the goals or needs of the school, AND no respondent articulated any connections between professional learning opportunities and the goals or needs of the school.

In 15 of the core sample schools, respondents offered mixed perceptions about whether their professional learning addressed the needs of the school, and so were classified as moderately aligned. Whereas some respondents articulated a clear rationale for specific professional learning opportunities, other respondents could not do so, or they expressed the view that the professional learning opportunities had an unclear purpose. At the principal and external support provider at one such high school identified topic areas for professional learning that included technology use, collaboration, and student behavior. Although school leaders described the professional learning opportunities associated with these topic areas as "focused" and "consistent," not all teachers expressed these same perceptions, nor could they articulate a connection between the opportunities and school needs.

Despite being involved with the strategic planning for professional learning at this school, the external support provider also perceived some disconnect between professional learning opportunities and the school's needs, explaining, "They [school leaders] are just picking the fruit off the tree. They will argue that there is a focus...but it has to be intense, and we are not doing it in an intense way."

In the remaining four schools, which were classified as minimally or not aligned, respondents were unable to articulate connections between their professional learning and school needs or goals. For example, respondents at one high school perceived most of the offerings to be ad hoc. Teachers reported that the professional learning opportunities were not tied to performance goals or to improvement plans, and the principal identified opportunities for the teachers but did not articulate how the opportunities were tied to school goals or student needs. As the instructional coach explained, "At the beginning of the year, we sent everyone a list of all the conferences and workshops across the state or county, and people had the chance to participate. [The external support provider] put that together." The coach did not indicate that the list of professional learning opportunities offered to teachers was informed by the principal and instructional coach, or based on student and teacher needs.

Format of Professional Learning

Teachers in the core sample schools reported participating in professional learning through multiple formats, for example small or large groups and formal or informal settings. Job-embedded professional learning is one format that may foster coherence and allow professional learning to be more community-centered (Bransford et al., 2000). Indeed, SIG requires that schools provide job-embedded professional learning if they are implementing the turnaround or transformation models, defining it as follows:

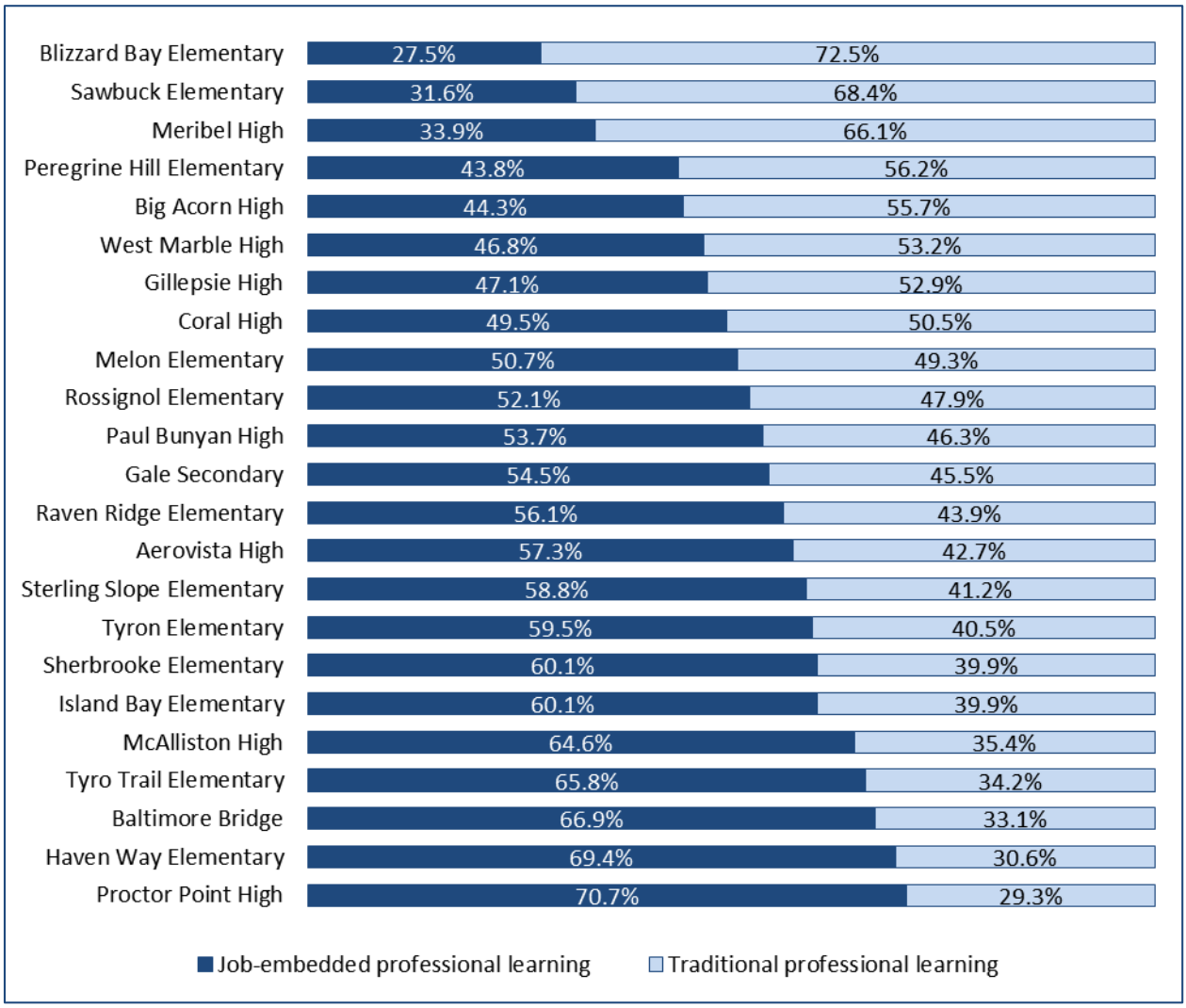
> *Professional learning that occurs at a school as educators engage in their daily work activities. It is closely connected to what teachers are asked to do in the classroom so that the skills and knowledge gained from such learning can be immediately transferred to classroom instructional practices. Job-embedded professional development can take many forms, including, but not limited to, classroom coaching, structured common planning time, meetings with mentors, consultation with outside experts, and observations of classroom practice. (U.S. Department of Education, 2012, p. 30)*

Using this framework and teacher survey data collected in spring 2012, we classified core sample schools' reported professional learning into two categories: traditional and job-embedded. Traditional formats include, but are not limited to, activities such as workshops, conferences, and college-degree courses. These activities tend to be conducted outside the teachers' regular classroom setting, and they tend to occur in concentrated blocks of time (e.g., over the summer or on a monthly basis). Our survey asked teachers to report the number of hours in which they participated in five different professional learning formats: (1) workshops, conferences, institutes, or seminars; (2) course(s) extended over several weeks, such as a college course; (3) PLC or meetings of colleagues designed to enhance professional learning; (4) formal coaching or mentoring; and (5) other. We categorized the first two formats as traditional professional learning and the next two as job-embedded professional learning.

In 15 of the core sample schools, teachers on average reported spending at least half of their total professional learning hours in job-embedded professional learning activities (see Exhibit 5.3). We are unaware of any research on striking the optimal balance between job-embedded and traditional professional learning formats, but one hypothesis is that it may depend on the context of the school and the needs of the teachers. For example, some schools in our sample are in districts that relied quite heavily on Teach for America (TFA) to staff their SIG schools. Data from our site visits suggest that TFA

teachers in these schools were concurrently working toward their credentials, which may at least partially explain why they reported participating in higher levels of traditional professional learning. More generally, schools with less experienced teachers might require more traditional coursework and workshops to build rudimentary pedagogical and content-relevant skills.

Exhibit 5.3.
Percentage of Total Professional Learning Hours Teachers Reported Spending in Job-Embedded and Traditional Activities, by Core Sample School, 2011–12



Source: SST teacher survey, spring 2012.
Notes: Includes 23 of 25 core sample schools (*N* = 810 teachers). Two schools were excluded from this analysis because they did not meet the 50 percent response rate threshold on the teacher survey. All school names are pseudonyms.
Job-embedded professional learning includes professional learning communities (PLCs) and formal coaching or mentoring. Traditional professional learning includes workshops, conferences, institutes, or seminars as well as courses extended over several weeks. Professional learning hours categorized as "other" were excluded from this analysis.

Using qualitative data from principals, teachers, instructional coaches, and external partners, we sought to deepen our understanding of schools' professional learning opportunities. For example, teachers at one elementary school reported spending an average of about one third of their PD hours on coaching.

The principal, teachers, and coaches explained that their four coaches, as well as the school's administrators, provide instruction on teaching practice during weekly common planning sessions for each grade and subject. They noted that common planning time allowed teachers who teach the same subject areas and grade levels to discuss their plans and align their content. Teachers at this school also reported taking part in lesson study, where one teacher would model a lesson and other teachers would watch, learn, and share their assessments of the lesson.

Building School-Level Structures to Foster Learning: Teacher Collaboration and Data Use

For teachers to be able to participate in and benefit from traditional or job-embedded professional learning activities, schools must create the necessary conditions and support structures. For example, to facilitate the use of professional learning communities (PLCs), schools must set aside regular, structured time for teachers to meet and collaborate. Likewise, to facilitate training on the use of data, schools (and districts) must promote regular access by teachers to student data. This could involve allowing access to district data systems or implementing a unique school-level system for data management and acquisition. In this section we examine our core sample schools' efforts to establish support structures for teacher collaboration and use of data.

School-Level Structures to Support Teacher Collaboration

Some researchers have hypothesized that creating community-centered learning environments that encourage teacher collaboration and create communities of practice will enhance teacher learning if they include opportunities for shared experiences and discourse around data about student learning (Bransford et al., 2000). Since then, correlational studies have documented a relationship between teacher collaboration and indicators of school improvement, including student outcomes (Goddard, Goddard, & Tschannen-Moran, 2007; Moller et al., 2013). To create these community-centered learning environments, schools could establish structures that facilitate (or in some cases, mandate) collaboration. Such structures could include regular meetings for common planning, a cycle of peer observation, or release time to jointly develop student assignments or assessments. Schools could also develop tools that guide teacher collaboration, such as protocols for PLCs or the expectation that each collaborative activity results in a product or tool for shared use (Wenger, McDermott, & Snyder, 2002).

Drawing on qualitative interview and focus group data, we found that **most core sample schools (16 of 25) reported engaging in efforts to establish conditions or structures to support teacher collaboration in Years 1 and 2 of SIG (2010–12)** (see Box 5.3). The most prevalent way that schools reported supporting teacher collaboration was by establishing a protected time for teachers to work together across grades, within a grade, or within a subject. Some schools also established expectations for the use of collaborative time. As the principal from one school explained:

> *What happened [before] was it was inconsistent. You had a time, you had teachers pulled out; it didn't happen all at the same time for the grade levels, so there wasn't a central focus. When teachers did try to collaborate, the subs didn't have management in the classroom, so the teachers were back and forth. So you could never get the consistency that you needed. So I think for us, [we needed] to have some of those structural elements, to have a set time, so now, Monday from 3:00 to 4:00 is our professional collaboration time.… SIG has allowed us to do that so we could get some of the structures, establishing norms, setting a focus on student learning.*

Box 5.3. School-Level Structures to Support Teacher Collaboration

Criteria to determine whether structures were in place to support teacher collaboration are based on Year 2 interview and focus group data (see Exhibit B.11 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: principals, teachers, instructional coaches, and external support providers.

Criteria to determine whether structures were in place to support teacher collaboration are based on Year 2 interview and focus group data (see Exhibit B.11 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: principals, teachers, instructional coaches, and external support providers.

Identified as having structures to support teacher collaboration

- At least one teacher and respondents in at least one other respondent group specifically described one or more of the following: scheduled weekly or monthly time for common planning or study groups, guidelines or protocols for efficient use of collaborative time, or other opportunities for peer-to-peer discussion of instruction or content; AND
- Respondents in at least two respondent groups specifically noted that structures to support teacher collaboration were new in Year 1 (2010–11) or Year 2 (2011–12) of SIG, or the SIG budget provided evidence that SIG supported this structure; AND
- No respondent explicitly reported that structures to support teacher collaboration had been eliminated or reduced in Years 1 or 2 of SIG.

In contrast, there was no evidence in nine core sample schools of efforts to establish collaborative structures during SIG. The principal at one such school explained, "With the cuts, unfortunately [common planning] was no longer available." The external provider at another school recognized the need for increased collaboration to build capacity but noted the school's current limitations, explaining:

> *Then there is the whole issue of building capacity of the adults to meet student needs and how we are going organize ourselves to do the work….. When you start building in collaboration time into the school day, that is very expensive time. And that has a lot of implications on your master schedule…we weren't able to do that [here].... I wasn't able to help them build their master schedule in a way that they had time during the day to talk about kids or so that they had time together to collaborate by content area. This coming year [Year 3 of SIG], we are going to work with the principal on that master schedule and build that time in.*

Among the 8 of these 9 schools that had a sufficient survey response rate, the average percentage of teacher survey respondents reporting improvement in collaboration at their school in 2011–12 was 37 percent.[39] Among the 14 of 16 schools with a sufficient survey response rate that made an effort to build collaborative structures, the average percentage of teachers reporting improved collaboration was 74 percent. Thus, schools that made the effort to establish structures to support teacher collaboration in

[39] The spring 2012 teacher survey included the following item, in which *collaboration among teachers* was listed as one such area: "To what extent has your school improved in any of the following ways during the 2011–12 school year?" Response options included "became worse," "stayed about the same," "moderate improvement," and "substantial improvement." The latter two response options were counted as having reported improvement in this analysis.

Years 1 and 2 of SIG were more likely to have teachers who perceived improvements in collaboration in Year 2 of SIG.

School-Level Structures to Support Data Use

The SIG turnaround and transformation models require schools to "promote the use of data to inform and differentiate student instruction" (U.S. Department of Education, 2010, p. 27). In many low-performing schools, teachers lack the skills to systematically gather and interpret information on student learning and then use it to modify or differentiate their teaching strategies. Teachers may be more likely to engage in regular data access and interpretation if districts and schools further establish structures that connect teachers to student data. Many districts around the country now facilitate teachers' access to data through online data platforms that integrate state assessment results and other measures, such as class grades, attendance, and disciplinary actions (U.S. Department of Education, 2009). Some also have adopted systems of formative or benchmark assessments, often administered every six to nine weeks, to provide more frequent and targeted information for teacher decision making (Goertz, Oláh, & Riggan, 2009; Olson, 2005). In some cases, teachers can select items through an item bank, review results in a Web-based platform, and disaggregate data by student subgroup or conceptual strand. Schools also may establish other policies or practices that support data use, such as setting aside time for data analysis or mandating use of a "data wall."

Qualitative interview and focus group data show that, overall, **most core sample schools (19 of 25) reported making an effort to establish structures to support data use, such as workshops on data use or hiring data coaches to guide teachers' work in this area, during the first two years of SIG** (see Box 5.4). For instance, an instructional coach at one school explained, "I've never worked for a school so data driven and data focused." One of the key structures at this school is the cycle of "data days" at the end of every grading period. Students do not attend school on data days, but teachers and administrators convene to review testing data and to plan for how to adjust instruction for the next six weeks. These days include a sequence of meetings, a structured action plan, and data displays from an online system.

Box 5.4. School-Level Structures to Support Data Use

Criteria to determine whether structures were in place to support data use are based on Year 2 interview and focus group data (see Exhibit B.12 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: principals, teachers, instructional coaches, and external support providers.

Identified as having structures to support data use

- Respondents in at least two respondent groups specifically described one or more of the following: access to diagnostic or benchmark assessments, an online data management system and early warning system, or external supports for data analysis; AND
- Respondents in at least two respondent groups specifically noted that structures to support data use were new in Year 1 (2010–11) or Year 2 (2011–12) of SIG, or the SIG budget provided evidence that SIG supported this structure; AND
- No respondent explicitly reported that structures to support data use had been eliminated or reduced in Years 1 or 2 of SIG.

As one teacher from this school explained:

> *At the end of every report period on data day, we have what are called data day conferences with a leader of the administration. And so it's one-on-one with me and my principal. I bring my reading levels, I bring my math tracker, I bring my benchmark scores, and we sit down and we say, "Okay, the kids…need to read 75 words per minute, and they're only reading 60. What can I do in the next six weeks to get them to read that extra 15 words per minute?" So it's a very specific, purposeful 30 minutes of just looking at the data with someone on the leadership team who can bring their background experience to you.*

Another teacher from this school added:

> *We will start with a whole-staff meeting with the benchmark data from the last six weeks. Later in the day we have an action plan, a document we need to fill out, looking at our data with our administration and grade team leaders…. We can print out a program called Performance Pathways. We can print out many different reports that show the data, each standard, how a student performed, what kid missed what question. I can look at it a million different ways, so in this Action Plan, I can pinpoint specific kids and skills.*

This example illustrates one school's use of its school calendar as well as a number of data tools (e.g., action plan) to facilitate teacher learning around data use.

In six schools, there was no evidence of efforts to build structures or supports for data analysis in the first two years of SIG. Two of these schools had evidence of some infrastructure for data use, but these supports were not new in 2009–10 or 2010–11, and appeared to pre-date SIG. In the remaining four schools, there was evidence that individual teachers engaged with data, but this engagement was not systematic throughout the school. For example, in one such school a teacher explained that she used data to guide her own instruction, "...but as a building, we don't view data as analyzing it, looking at it, and [revising] what are we going to do. I don't think we're there yet."

Did Teachers Report Learning from Professional Learning Opportunities?

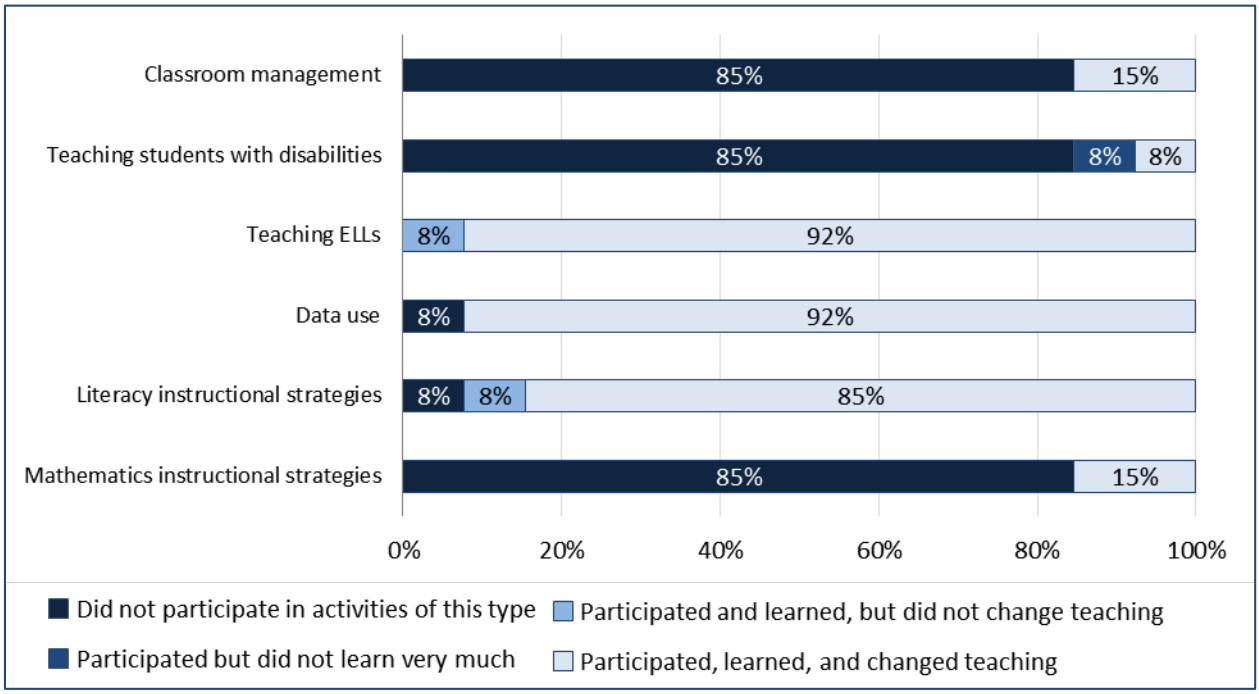
Using spring 2012 teacher survey data, we examined whether teachers reported learning from their participation in professional learning opportunities. Teachers were asked to report if they participated in professional learning on seven topics,[40] and if they did participate, they were asked whether they had learned from it and changed their teaching, whether they had learned from it but had not changed their teaching, or whether they had not learned from it. For core sample high schools, our analysis of teachers' responses to professional learning on "mathematics instructional activities" includes only self-identified mathematics teachers, and our analysis of teachers' responses to professional learning on "literacy/English language arts instructional strategies" includes only self-identified English language arts teachers. Two high schools were excluded from this analysis because the total number of mathematics and English language arts teachers who responded to the survey was less than five, which we deemed insufficient for a meaningful analysis. Another two schools were excluded because of an insufficient overall response rate (less than 50 percent). Thus, 21 of 25 core sample schools were included in this analysis.

[40] The seven topics were: (1) mathematics instructional strategies, (2) literacy/ELA instructional strategies, (3) teaching English language learners (ELLs), (4) teaching students with disabilities, (5) data interpretation and use, (6) classroom management, and (7) other activity.

In 17 of 21 core sample schools with sufficient data, most teachers reported learning and changing their practice after participating in professional learning on math, literacy/English language arts, or data use (the three most commonly reported professional learning topic areas). In 12 schools, teachers most commonly reported changing their practice in literacy/English language arts (ELA). For example, 90 percent of teachers at one school reported learning and changing practice in ELA instruction as a result of professional learning opportunities, compared with 45 percent for data use and 18 percent for mathematics instruction. At another school, 83 percent of teachers reported learning and changing practice in ELA instruction as a result of professional learning opportunities, as compared with 38 percent for data use and 40 percent for mathematics instruction.

Qualitative data from our core sample schools offer some potential hypotheses about why changes to teacher practice were more likely to be reported in some topic areas than others. For example, the principal and leadership team at Haven Way reported adopting a fairly narrow focus with respect to teacher professional learning. They reported choosing to focus on just a few topics with the expectation that doing so would produce significant changes in practice. These areas of focus were closely aligned with the principal's perceived school needs. Exhibit 5.4 shows that in the topic areas that the principal identified as priorities in 2011–12—ELL instruction, literacy, and data use—teachers reported learning and changing practice.

Exhibit 5.4.
Percentage of Teachers at Haven Way Elementary Reporting that They Learned and Changed Practice as a Result of Professional Learning Opportunities, 2011–12



Source: SST teacher survey, spring 2012.
Notes: Includes 13 of 18 teachers at this school (72 percent survey response rate).

Likewise, Exhibit 5.4 shows that teachers mostly reported not participating in professional learning activities in areas that the principal did not identify as a priority. When asked about the success of the professional learning activities in building teacher knowledge and skills and changing practice, the

principal explained that her own regular classroom observations confirmed that most teachers had changed their practices to incorporate the new strategies being taught. She went on to say that there were increases in student test scores for all subgroups of students, including ELLs, which she felt were evidence that teachers were using new instructional strategies on a daily basis.

Chapter Summary

The total number of hours that teachers reported participating in professional learning opportunities during 2011–12 varied across the 25 core sample schools. The total number of professional learning hours that teachers reported also varied within schools. Most teachers in most core sample schools reported "learning" (gaining new knowledge and skills) from the professional learning opportunities in which they participated. Teachers who participated in activities focused on mathematics instruction, ELA instruction, and data use were the most likely to report learning and changing their teaching practice as a result. The format of professional learning activities also varied. In 15 core sample schools, teachers reported spending the majority of their professional learning hours in job-embedded activities. Respondents in 6 core sample schools reported that professional learning activities addressed school needs, while respondents in 4 schools reported that this was rarely the case. Respondents in the remaining 15 schools felt that professional learning activities sometimes addressed school needs. Most core sample schools reported making efforts in Year 1 and 2 of SIG to enhance teacher learning by establishing policies, structures, and systems that would support teacher collaboration (16 of 25 schools) or data use (19 of 25 schools). Three schools reported doing neither, although one of these schools appeared to already have had an infrastructure to support data use and collaboration prior to SIG.

The results of these analyses are descriptive, and explore schools' *reported efforts* to provide professional learning opportunities. We did not measure all of the features of professional learning, the quality of professional learning, teachers' actual participation in these activities, or the extent to which teacher learning actually occurred. Thus, we cannot establish with the data we have any relationship between professional learning and changes in human capital or student outcomes. However, we can establish that most of our core sample schools reported *making an effort* to build human capital through professional learning. That is, most of these schools reported providing teachers with a variety of professional learning opportunities, both at the school and through other programs, and supporting the ongoing implementation of these skills by creating infrastructure to support their regular use.

Chapter 6: District and External Support Providers' Efforts to Build Human Capital in SIG Schools

Research on low-performing schools underscores the role of districts and external support providers in the improvement process, explaining that they may provide knowledge, training, and services that school-level staff cannot (Finnigan, Bitter, & O'Day, 2009; Honig, 2004; Massell & Goertz, 2002; O'Day & Bitter, 2003; Supovitz, 2006; Zavadsky, 2012). SIG requires districts to ensure that their transformation schools receive some form of external support, whether from the state, district, or a designated turnaround partner through "ongoing, intensive technical assistance and related support" (U.S. Department of Education, 2010, p. 40). SIG also requires districts to "adopt a new governance structure, which may include, but is not limited to, requiring the school to report to a new *turnaround office* in the LEA or SEA, hire a *turnaround leader* who reports directly to the Superintendent or Chief Academic Officer, or enter into a multi-year contract with the LEA or SEA to obtain added flexibility in exchange for greater accountability" (U.S. Department of Education, 2010, p. 27). With respect to external support providers, SIG allows restart schools to contract with education management organizations or charter management organizations (EMOs or CMOs), and other SIG schools to partner with "turnaround organizations" to help support implementation.[41]

In this chapter, we examine the role of districts and external support providers in supporting efforts to build human capital in the 25 core sample schools. With respect to districts, we describe the types of supports provided, how districts organized their staff to provide these supports, and the extent to which schools found district supports useful. With respect to external support providers, we describe the types of organizations that are partnering with our core sample schools to provide supports, explore two dimensions of these supports—fit and intensity—and then report the extent to which schools perceived partnerships with external support providers to have helped with improvement.

Box 6.1. Key Chapter 6 Findings

- Respondents from all 22 schools included in the district support analyses reported that their district provided them with at least one of the following: teacher professional learning activities (20 schools), principal professional learning activities (15 schools), supportive teacher staffing policies (14 schools), and structures and systems to support data use (13 schools).
- In 2011–12, 9 of the 13 core sample districts, which served a total of 16 core sample schools, reported having sub-districts or designated staff positions in place to support low-performing schools. Schools in such districts tended to report receiving support in more areas than schools in other districts.

[41] SIG uses the phrase "turnaround organization" as follows: "The LEA might also contract with a turnaround organization to assist it in implementing the turnaround model. The LEA might also use external providers to provide technical expertise in implementing a variety of components of the school intervention models, such as helping a school evaluate its data and determine what changes are needed based on those data; providing job-embedded professional learning activities; designing an equitable teacher and principal evaluation system that relies on student achievement; and creating safe school environments that meet students' social, emotional, and health needs" (U.S. Department of Education, 2010, p. 59).

Box 6.1. Key Chapter 6 Findings

(continued from previous page)

- Respondents from 10 of the 22 core sample schools included in these analyses perceived their district's support as useful to their school's overall improvement efforts. Respondents from 8 schools expressed mixed perceptions of their district's support, while respondents from 3 schools indicated that their district's support (or lack thereof) was constraining improvement efforts. The 1 remaining school was excluded from this analysis due to insufficient data. In 4 of the 8 districts with multiple core sample schools, respondents in different schools (within the same district) had different perceptions of how useful their district supports were.
- In 2011–12, 22 of the 25 core sample schools reported receiving support from an external support provider to build human capital, such as professional learning (22 schools) or staffing support (3 schools).
- Thirteen schools reported receiving external support from a "SIG partner," an organization or individual that was considered central to the change process under SIG. Collectively, these schools identified 17 SIG partners, the majority of which reported providing ongoing assistance with additional support (11 out of 15 SIG partners with sufficient data) and were judged by respondents to be a relevant fit for the school (11 out of 15 SIG partners with sufficient data).
- Overall, respondents described 12 of the 15 SIG partners with sufficient data in positive terms, reporting that the services, advice, or feedback they received contributed to the school's improvement efforts. Respondents described the remaining 3 SIG partners in mixed terms.

District Efforts to Build Human Capital

Schools—with the exception of independent charters—exist in the context of district systems whose policies and practices may either facilitate or impede the development of human capital. We focus on three aspects of district support: the type of supports, how districts organized their staff to provide these supports, and the perceived usefulness of the supports. Our findings are based on interview and focus group data collected during the 2010–11 and 2011–12 school years in 22 of the 25 core sample schools.[42]

Types of District Supports for Building Human Capital

Our core sample schools reported using staffing and professional learning as two levers to build human capital. Although schools sometimes appeared to act on their own—for example, establishing job-embedded professional learning communities in their schools—respondents in most of our core sample schools reported that their district supported the building of human capital in some way (see Box 6.2).

[42] The three restart schools in the core sample were excluded from these analyses because they are managed by EMOs or CMOs. These schools are discussed later in the chapter, when we focus on external support providers.

Box 6.2. District Support Services to Build Human Capital in Core Sample Schools

This analysis focuses on four broad categories or domains of district support services—interpreting and using data; teacher staffing policies (recruitment and retention); teacher professional learning; and building school leadership capacity. Identification criteria for supports are based on Year 2 interview and focus group data (see Exhibit B.13 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: principals, district administrators, teachers, and instructional coaches.

Identified as a support

- The principal and/or a district administrator and a respondent from at least one additional respondent group identified one or more specific support service as being supplied by the district. For district supports related to teacher staffing and building school leadership capacity, the threshold was lowered to reports from the principal and/or a district administrator only, as these respondents were in the best position to describe these types of supports.

District and school respondents from 22 schools nested in 13 districts reported that the district provided supports for building human capital in at least one of the following four areas: teacher professional learning, principal professional learning, teacher staffing policies (recruitment and retention), and structures and systems to support data use. Most (14 of 22 schools) reportedly received district services in at least three of the four areas.

Respondents from 20 core sample schools nested in 12 districts reported receiving district supports related to teacher professional learning. For example, respondents in one school located in a relatively small district reported that the superintendent himself was involved with observing and coaching teachers, so that he could better understand how to support them in implementing the pedagogical strategies that they were learning about in district-funded workshops. In another set of schools, all in the same large urban district, district administrators and teachers described an intensive, weeklong "academy" for SIG teachers led by district staff. This academy focused on preparing teachers for the school year by reviewing district-sanctioned "models and frameworks" with teachers who were grouped by discipline. In contrast, respondents from four schools reported that districts funded teacher professional learning but did not take an active role in providing it themselves. Often, district administrators and school principals identified a mix of these two approaches where district staff both led some of the teacher professional learning and helped school-level staff facilitate other activities on their own.

Principals from 15 schools nested in 8 districts reported receiving district professional learning support for school leaders. Examples included one-on-one leadership coaching for principals, cross-school peer-group learning networks, and traditional professional learning workshops focused on building leadership skills. In one district, all principals who are part of a sub-district supporting low-performing schools are reportedly matched with local entrepreneurs. As the district administrator explained, "It's an opportunity for principals to be exposed to more entrepreneurial ways of reform, and for the business community to see the reality of turning around schools, which allows them to be more supportive." In another district, principals reported meeting on a monthly basis to share best practices and problem-solve collectively. One principal in this district explained that these collaborative meetings also included

visits to each other's campuses to see how best practices are being implemented in an effort to "systematize" these best practices across multiple low-performing schools.

District administrators and principals from 14 schools nested in 8 districts reported district support related to teacher staffing. Examples included district policies that offered monetary incentives for teachers recruited to teach in hard-to-staff schools, as well as changes to district hiring and firing policies that allowed SIG schools flexibility to retain teachers who had less seniority but were considered a good fit at the school. One district reportedly keeps all teachers at SIG schools on annual contracts, which allows principals to remove ineffective teachers more easily. In another district, a senior administrator explained how he has created new leadership positions within SIG schools as a way to promote teachers who have completed teaching intern programs (e.g., Teach for America) and give them more incentive to stay in the district.

Lastly, respondents from 13 schools nested in 8 districts reported receiving district supports related to creating conditions to support data use. The reported supports included district benchmark assessments and district data systems that incorporated tools to allow school leaders and teachers to access and manipulate student data. Often, this infrastructure was reportedly accompanied by new district data-use policies or district-driven professional learning. At one school, for example, the district reported adopting new benchmark assessments and then required all schools to incorporate these assessments into their overall approach to data-driven instruction and school improvement. To support schools in implementing this new policy, the district reported providing teachers and school leaders with ongoing training sessions.

District Organizational Structures That Support SIG Schools

The 22 core sample schools included in these analyses are situated in 13 districts. The 13 districts reported using two primary organizational structures to support their SIG schools. First, districts created sub-districts or offices tasked with providing specialized support to a set of schools with similar needs. This approach aligned with SIG, which suggested creating a "turnaround office." Second, districts created staff positions responsible for providing specialized support to a set of low-performing schools. Sometimes sub-districts or staff members worked solely with SIG schools, and other times schools were organized on the basis of performance or geography.

In 2011–12, 9 of the 13 districts, which served 16 core sample schools, reported having sub-districts or staff positions to support low-performing schools (see Box 6.3). Four of these districts, which served nine core sample schools, established sub-districts, often referred to as "zones," whose role was oversight and support for the turnaround efforts in specific sets of low-performing schools, including SIG schools. In one of these districts, SIG reportedly served as the impetus to develop a sub-district to provide direct services to the district's SIG schools. In another one of these districts, geographic sub-districts existed prior to SIG, but SIG-specific staff were reportedly hired to supplement existing staff in a number of these sub-districts.

Five of these nine districts, which served seven core sample schools, did not create new sub-districts but did establish central office positions or teams charged with overseeing and supporting SIG schools. Districts that created new staff positions typically reported combining direct service provision with SIG-related monitoring and compliance activities. For example, one district used district-level SIG funds to hire a full-time staff member tasked with making sure that all of the district's SIG schools were in compliance with grant specifications. She was the district's liaison with the state Department of Education and monitored grant implementation at each SIG school. However, this staff member also

served in a coaching role for SIG principals. Both she and a school principal explained that she was on campus weekly and worked with principals to problem-solve issues taking place in their schools.

Box 6.3. District Organizational Structures to Build Human Capital in Core Sample Schools

This analysis focuses on two specific district organizational structures to support low-performing schools, such as SIG schools, in the improvement process: establishment of subdistricts and creation of specific staff positions (i.e., central office positions or teams). Identification criteria for structures are based on Year 2 interview and focus group data (see Exhibit B.14 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: principals, instructional coaches, teachers, and school improvement team members.

Identified as a district organizational structure

- A district administrator and a respondent from at least one additional respondent group identified the structure as being in place.

The remaining four districts, which served six core sample schools, reportedly did not have any specialized structures in place to support SIG schools in 2011–12. This does not mean that these schools did not receive any district supports, only that SIG schools were not singled out to receive more or different supports through new or adapted governance structures designed specifically for that purpose. In fact, district administrators and school principals from these six schools explained that the district offered uniform supports to all schools, both SIG and non-SIG.

Although all 22 schools included in this analysis reported receiving at least one type of district support for building human capital, the ones that were organized into a sub-district with other SIG or low-performing schools or had designated district staff to support SIG schools tended to report receiving support in more areas than schools that were in districts not organized in this way. For example, respondents in eight schools reported receiving support in all four areas, and seven of these eight schools were located in districts with sub-districts or designated staff assigned to support SIG schools. The principal at one of these schools explained, "We have probably the most knowledgeable administrators in the district [leading our sub-district]. We are given so much support that there is no way of not knowing certain things…. Every day we have somebody here [from the district zone]. They come and do common planning and train teachers." In contrast, respondents in three of the six schools from the remaining four districts with no SIG-specific infrastructure reported receiving support in only one area. The principal at one of these schools, where the sub-district structure was dismantled in 2011–12 because of budget cuts, reported receiving minimal support from the district that year. The principal explained, "From the district level, the [sub-district] office was closed, and those district support personnel were dispersed throughout other offices…. Our assistant superintendent understands the work…but we're also 1 of 60 schools now instead of 1 of 6 or 10 schools, so that has some level of challenge."

Perceptions of District Support

In this section, we examine the extent to which our 22 core sample schools included in the analysis above perceived their districts as providing useful supports that facilitated overall school improvement (see Box 6.4). Respondents in 10 schools perceived their district's supports as useful, while respondents in 8 expressed mixed perceptions. Respondents in three schools indicated that district supports (or lack

thereof) were not useful for their improvement efforts. The one remaining school was excluded from this analysis of perceptions due to insufficient data.

Box 6.4. Perceived Usefulness of District Supports to Core Sample Schools

School-level classifications on perceptions of district support are based on Year 2 interview and focus group data (see Exhibit B.15 for more detail on the analytic procedures). Although the data used in this analysis primarily focused on the usefulness of district support specifically related to building human capital, in some cases, respondents spoke about the usefulness of the district's support as a whole, which may have included other types of support. For this analysis, *respondents* refer to individuals from the following respondent groups: principals, other school leaders (assistant principals, school leadership team members), teachers, and instructional coaches.

Perceived district supports as useful

- The principal and at least one other respondent indicated that district supports were useful to school improvement efforts (for district supports related to teacher staffing or building leadership capacity, the threshold was lowered to reports from the principal only, as the principal was in the best position to describe this type of support); AND
- The principal described district administrators as accessible and helpful when assisting the school to solve problems and overcome challenges to improvement; AND
- No more than one respondent described district supports as constraining school improvement.

Mixed perceptions of district support

- The principal disagreed with at least two other respondents about the usefulness of district supports; OR
- The principal and at least one other respondent indicated that certain district supports were useful, while others were not useful.

Perceived district supports as not useful

- The principal and at least one other respondent indicated that district supports were not established, not useful, or were slowing or preventing school improvement efforts; AND
- The principal described district administrators as inaccessible or difficult to work with when assisting the school to solve problems and overcome challenges to improvement; AND
- No more than one respondent described district supports as useful to school improvement.

In the 10 schools that perceived their district as providing useful supports, respondents spoke positively about their interactions with district staff, the accessibility of district staff, and the overall level and types of support they received from the district. For example, district and school respondents at one of these schools indicated that a new superintendent and some district office restructuring had created an increased level of district support during Year 2 of SIG. Respondents described how the district supported the school's use of data-driven inquiry by establishing a new data system, holding monthly data collaboration days for teachers, and providing professional learning on data management and analysis. The district also reportedly offered a range of teacher professional learning sessions and hired two coaches to work with teachers in the school at least one day a week conducting classroom observations, lesson debriefs, and lesson demonstrations. Teacher respondents expressed consistently positive views of the coaches' work. For instance, one teacher praised her coach for providing regular

feedback on her classroom instruction: "She came in once a week, and she left us notes. You know, in the past, you might have an administrator come through your classroom three times and then give you some feedback. This was feedback every week." The school's principal reported receiving useful guidance from district leaders during the school improvement process, and she appreciated how as principal of a SIG school, she was afforded special authority in making staffing decisions during a time of district layoffs. Rather than being forced to "take the next person off the layoff list," she was able to interview candidates from the pool of laid-off teachers and recommend particular individuals for the school.

In another school, district supports were different but also perceived as useful. Here, district administrators reportedly took a more responsive approach to service provision. The principal explained that the district provided a good base of support, such as professional learning on Common Core State Standards and additional curriculum and instruction support for the principal himself. The principal explained, "If I'm having an issue or have concerns in various content areas, then I have the freedom to call the [district administrator] to say, 'I need help'." However, the majority of the support provided by the district was developed by school leaders and submitted to the district for approval, rather than provided universally to all SIG schools. The principal explained that his district contacts "completely bought into our school improvement initiatives" and gave the school "flexibility to implement its school improvement efforts with a few tweakings here and there if necessary."

In the eight schools with mixed perceptions of the district's support, respondents found some district supports useful, but other supports were perceived to be either a poor fit for the school or bureaucratic challenges that impeded the school's implementation of improvement strategies. For example, when asked whether the district provided guidance on the change process, the principal at one school responded, "They do, but they don't." She and an instructional coach noted that the district was useful in providing professional learning activities; however, some teacher respondents reported receiving unclear and inconsistent information at these district professional learning sessions. Respondents at this school also expressed consistently negative views of a district coach assigned to serve as a liaison between the school and the central office. The principal described this coach's role as duplicative and an inefficient use of the district's limited resources. Members of the school's leadership team similarly dismissed the district coach as unhelpful, with one member remarking, "We really don't understand why he is here."

In the remaining three schools where the district was perceived as not useful to school turnaround efforts, respondents explained that they received limited guidance and services from district staff, found district leaders to be inaccessible, and found the services that they did receive to be either insufficient or an impediment to the school's overall improvement process. These three schools were in three different districts, two of which had additional SIG schools in our core sample. The other core sample schools in those two districts categorized district support as useful or mixed. At the one school in the district that did not have additional schools in our core sample, respondents described how the school's history of being neglected by the district—its "red-headed stepchild"—continued throughout the SIG process. Respondents partly attributed this to the fact that the district central office continued to grapple with staff turnover. A school coach explained how this upheaval at the district level contributed to the district's lack of awareness and action regarding the school's SIG efforts:

> *Because so many changes are going on at the district office, you try to explain the SIG grant, and it still doesn't stick because there are so many other things going on right next to them. And we're so far [away]; it's not on their radar.... I think the district is the main challenge.... I think we might be doomed to repeat history if no one in the district office knows what is going on here.*

Other respondents explained that the school is in need of more effective staffing policies that would enable them to retain the new staff that were hired as a result of the SIG turnaround model.

In four of eight districts with more than one core sample school, respondents in different schools (within the same district) had different perceptions of how useful their district supports were. Possible reasons for these differences in perception include differences between schools in the principal's familiarity with district staff and district policies, the perceived fit between district supports and the school's own needs, and the extent to which schools had flexibility to choose which district services they received.

We focus on two schools from one of our districts to illustrate some of these differences. The principal at the first school noted how requests for district coaching support were either rejected or met only after substantial "squawking." The principal further explained that the school was hit disproportionately hard by district budget cuts, leading him to question whether the district was serious about turning around the school: "I do not feel like I have all of the support from the district. There is not the urgency. I still believe the SIG grant has been used to balance the budget." The district administrator in the turnaround office had a different perspective. When asked about the support that was provided to this particular school, the administrator said, "We sat down with [the principal] and said, 'In an ideal world, what types of support would you have in place?'" This prompted a discussion of placing district-funded coaches at the school who would help teachers with differentiated instruction, specifically for English language learners. Another administrator in the same office commented that the district really "believes in the principal and his leaders." However, the principal expressed doubt that the district is making decisions that are in the students' best interests.

In contrast, the principal at the second core sample school from this district cited instances in which district staff would assist her in "navigating the bureaucracies of SIG," at times jumping in to say, "she's got to be able to do that" because of her school's SIG status. The district turnaround officer confirmed this, explaining that a major component of his job was to "be a facilitator or a blocker to shield that school from some of the noise that can surround it."

One major difference between the two school principals from this district was their familiarity with the district. The principal from the second school had been a long-time district administrator who was well connected and who understood how district policies would influence her school and whom she would need to speak with if she needed to resolve problems or access services. The principal from the first school, while a long-time educator, was a newer principal (three years of experience) and had never worked at the district level. Although we cannot definitively determine whether the second principal was better able to protect her school from such changes due to her "insider" status in the district, it appears that having strong connections to district administrators may have helped her negotiate supports for her school more effectively than the first principal.

In another district, the principal at one of the core sample schools described certain district supports as useful but the majority of them as "a waste and part of a district agenda that I do not support." In contrast, the principal at another school in that same district described these same supports as "very meaningful" and explained, "I have been very supported by the district. I've never seen it like this in all my years as an administrator." The district administrator did not provide evidence to support why one school would perceive district supports as more useful than another within the sub-district, and both schools were supported by the same district personnel. However, low-performing schools in this district are reportedly grouped on the basis of their performance, with higher-performing schools given more flexibility to participate in district-provided professional learning depending on the principal's perceptions of what the school needs. The second school was part of this higher tier of low-performing

schools, and so this potentially could have influenced the extent to which school respondents perceived district supports to be more useful than those at the first school.

External Support Provider Efforts to Build Human Capital

Districts often partner with external support providers to deliver services to low-performing schools when they are not able to offer these services themselves. Likewise, schools often seek out external partners when leaders identify a need that the school cannot address. SIG encourages its grantees to partner with external support providers—such as school turnaround organizations, education management organizations (EMOs), and charter management organizations (CMOs)—to work with schools to facilitate the turnaround process (U.S. Department of Education, 2010, p. 40). Depending on local charter authorization laws, CMOs or EMOs can take on different roles. Some assume all traditional responsibilities of a school district, and others are limited to professional learning, instructional strategies, and curricular support. The three restart schools in our core sample reported receiving a range of supports, each with a different relationship with the district. Because of this variation, we did not include CMOs and EMOs in the analysis of district supports summarized in the prior section. In the analyses that follow, we include these restart schools, bringing our sample to 25 schools.

In this section, we describe external support provider efforts to help our core sample schools build the capacity of teachers and school leaders. First, we describe the broad set of external individuals and organizations to which our schools turned for support, as well as the areas in which these organizations supported the schools. Next, we focus in on 13 of the 25 core sample schools where principals identified an organization that they considered to be their primary external support provider for SIG. In the analyses of these SIG partners, we explore two dimensions of external support that have been posited to be associated with quality (Boyle et al., 2009): intensity and fit.[43] Last, we describe our schools' perceptions of the usefulness of support provided by the SIG partners.

Number and Types of External Support Providers

In 2011–12, 22 of the 25 core sample schools reported receiving supports to build human capital from organizations other than the district. Collectively, these schools identified 53 different external providers, who provided supports related to building human capital. Among these 22 schools, 19 reported receiving support from 1 to 3 providers, while the remaining 3 schools reported receiving support from 4 to 6 providers. Providers included colleges and universities, CMOs, EMOs, school turnaround organizations, curriculum developers, consultants from SEAs, and other organizations (such as local counties or advisory boards).

It is unclear what the optimal number of support providers for any given low-performing school is because low-performing schools have different performance problems, and support providers engage with schools in varied ways. However, previous qualitative studies of external support have highlighted cases in which multiple providers were perceived to send mixed messages and limit the coherence of the support (Boyle et al., 2009). Among the core sample schools, there is evidence that teachers in the two schools with the highest number of support providers (five and six providers) were also more likely to strongly agree with the survey statement: "I worry that we are adopting too many different programs and practices in this school." Although we cannot infer any causal relationship between a high number

[43] Other hypothesized dimensions of higher-quality support include coherence, timeliness, responsiveness, and stability, but our data were insufficiently detailed to explore these dimensions.

of support providers and these survey responses, it is possible that multiple support providers could introduce many different programs and practices that might detract from programmatic coherence.

Areas of External Support

Respondents from all 22 of the core sample schools that reported working with an external support provider indicated that the provider delivered some form of professional learning (See Box 6.5). For example, respondents from 20 schools reported receiving professional learning on curriculum and instruction, and respondents from 8 schools reported receiving professional learning on leadership development. Data use and culture and climate were other reported professional learning topics. At one of these schools, an external provider reportedly offered training to all teachers in the school regarding strategies for building personal connections with students and fostering a civil learning environment in each classroom. The format of the professional learning varied. In one school, the school turnaround organization delivered a three-day teacher workshop at the beginning of the school year on how to create, administer, and use common formative assessments as part of instruction. In another school, the curriculum developer delivered math-related professional learning to teachers through classroom observations and debriefing. Based on those observations, the developer then facilitated a one-day workshop that focused on analyzing classroom lessons.

Box 6.5. Areas of External Support Provider Support to Build Human Capital

This analysis focuses on 10 areas of external support to improve the capacity of school leaders and staff, identified through the Year 2 qualitative data. These areas include professional learning related to (1) budget planning, (2) coaching, (3) community involvement, (4) curriculum and instruction, (5) data use, (6) school culture and climate, (7) school leadership, (8) staff collaboration, and (9) strategic planning as well as staffing support related to (10) teacher recruitment, retention, or evaluation. Identification criteria for structures are based on Year 2 interview and focus group data (see Exhibit B.16 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: district administrators, principals, teachers, school improvement team members, and instructional coaches.

Identified as an area of support

- The principal or a school improvement team member, and a respondent from at least one additional respondent group, identified the support as being supplied by the external support provider.

Respondents from 3 of the 22 core sample schools that reported working with an external support provider indicated that the provider gave staffing support by facilitating efforts to recruit, retain, or evaluate staff. These three schools were implementing the restart model, in which an external organization assumes management responsibility for schools. For example, the CMO's Human Resources Department reportedly supported the teacher-hiring process at one of these schools by pooling applications and recruiting teachers. At another one of these schools, the EMO reportedly developed a tool based on a teaching and learning framework that the principal found helpful in evaluating and giving feedback to teachers. The principal explained, “Now when I come into any teacher’s classroom, I pull out my [tablet], and I’m on there, and I’m scripting what the teacher is doing and the students are doing…. [The teachers] know what to expect, and if I walk out of that room, and they go to their computer, and they don’t see my e-mail, they will come down and say ‘I didn’t get my feedback’.”

Support From Primary SIG Partners

We now turn to a subset of **13 core sample schools, whose respondents identified a specific SIG partner, which is an organization or individual that the school leaders considered central to the change process under SIG. Collectively, these 13 schools identified 17 SIG partners**, of which 3 were CMOs and EMOs for the 3 restart schools in our sample while the remaining were partners for the other 10 schools and were not involved with the direct oversight and management of the school. Of the 17 SIG partners, 16 reported working with teachers, 14 reported working with principals, and 8 reported working with school improvement teams and instructional coaches. Most partners reported working with multiple groups within each school. For example, at one school, the SIG partner reportedly provided a broad range of curriculum and instructional supports, and in doing so interacted with the principal, curriculum coordinator, teachers, and school leadership team. We examined two dimensions of quality associated with the support provided by these SIG partners (see Boxes 6.6 and 6.7):

- The *intensity* of support—in terms of the number of days of support or the span of time over which support is provided—may influence the likelihood of fostering and sustaining school-level change (Davis, McDonald, & Lyons, 1997; Education Alliance at Brown University, 2006; Finnigan, Bitter, & O'Day, 2009; Laguarda, 2003; Mintrop & Trujillo, 2005; Reville, 2007).
- The *fit* of support encompasses many features, including the alignment of the expertise of a support provider to a specific school's needs, and the fit between a school's challenges and the selected intervention (David, Kannapel, & McDiarmid, 2000; Rennie Center, 2005). If there is a mismatch—for example, a school improvement facilitator with suburban experience is assigned to a rural school—it may be more difficult to foster meaningful dialogue, to identify appropriate interventions, to sustain improvement actions, or to garner the respect and trust of school personnel.

Box 6.6. Intensity of SIG Partner Supports

School-level classifications on the intensity of supports provided by SIG partners (e.g., external support providers that school leaders considered central to the change process under SIG) and core sample schools are based on Year 2 interview and focus group data (see Exhibit B.17 for more detail on the analytic procedures). For this analysis, *external support provider* refers to the external support provider who served as the school's SIG partner, and *respondents* refer to individuals from the following respondent groups: principals and external support providers.

Concentrated

- The principal or external support provider reported that SIG partner provided supports through one-time professional learning activities.

Ongoing

- The principal or external support provider reported that SIG partner provided supports regularly throughout the year.

Ongoing with additional supports

- The principal or external support provider reported that SIG partner provided supports that are ongoing with additional supports (i.e., one-time professional learning activities; work in summer; remote supports).

Box 6.7. Perceived Fit Between SIG Partners and Core Sample Schools

School-level classifications on the fit between SIG partners (e.g., external support providers that school leaders considered central to the change process under SIG) and core sample schools are based on Year 2 interview and focus group data (see Exhibit B.18 for more detail on the analytic procures). For this analysis, *external support provider* refers to the external support provider who served as the school's SIG partner, and *respondents* refer to individuals from the following respondent groups: principals, external support providers, and school improvement team members.

Relevant

- The external support provider and either the principal or a member of the school improvement team described the external support provider as having relevant experience, defined as expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience; AND
- No respondent mentioned any specific shortcomings of the external support provider's experience and expertise.

Moderate

- The external support provider and either the principal or a member of the school improvement team described the external support provider as having some relevant experience, but mentioned shortcomings in one of the three areas: expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience.

Low

- The external support provider and either the principal or a member of the school improvement team described the external support provider as not having relevant experience, mentioning shortcomings in at least two of the three areas: expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience.

The majority of SIG partners (11 of 15 with sufficient data) reported providing ongoing assistance with additional support to the core sample school that they served. These SIG partners reported supplementing their regular, on-site assistance with additional professional learning activities, summer activities, or electronic communication. For example, the SIG partner at one school reported delivering monthly professional learning support to the principal, in addition to weekly visits with other staff. To get ready for the school year, the SIG partner also reported delivering a weeklong professional learning session to teachers and a separate weeklong session to the principal during the summer.

The remaining four SIG partners who provided sufficient data on the frequency and duration of their assistance reported providing ongoing support to their core sample school**.** Thus, all 15 SIG partners included in this analysis reportedly worked with their core sample school on a regular basis throughout the school year. However, the frequency of interactions among SIG partners and the schools they served varied. Twelve SIG partners were reportedly present in the schools on a weekly basis throughout the school year. For example, the turnaround officer at one school was reportedly on-site two days each week, meeting with the leadership team, visiting classrooms, supporting instructional coaches, and spending time with the principal in his office or during lunch duty. Because the school is small, the SIG partner concluded that "two days a week is plenty" to deliver support. In another school, the SIG

partner reportedly provided weekly support for a few months but then tapered off. The remaining three SIG partners reported providing support every other week, monthly, or every other month.

The majority of SIG partners (11 of 15 with sufficient data) were judged by respondents to be a relevant fit for the school, in terms of the partner's expertise and experience. For example, the SIG partner at one school was perceived to be a good match because he had a background as a teacher and principal in urban, low-performing secondary schools. Likewise, the SIG partner at another school had experience as an administrator of a low-performing rural school, but his background in higher education reportedly provided a broader perspective on the school improvement process. As the principal explained:

> *I actually sat on the interview panel when we were going through to hire for that position, and from the perspective of "This is the person I'm going to work with," I sat and I listened to him, and his background is rather interesting. He's been a high school principal, I want to say, at four different sites. He was a college professor and then an assistant superintendent for the county. So his experience was pretty vast.*

The principal also explained that an external support provider must "develop a really professional solid working relationship with the site administrator.… It's a relationship of trust that seems to work out pretty well for us at least."

The other 4 of 15 SIG partners with sufficient data were judged to be a moderate fit for the school. For example, both individuals from one of these SIG partners, who were working with the principal extensively on strategic planning, had worked 10 years in education and had some limited experience with school leaders. However, these partners lacked personal experience working in urban or low-performing schools or as school administrators in any context. The individual from another one of these SIG partners had a background at the elementary level and stated that it was a shift for her to come to the high school. She discussed her challenge of working in a high school given her background and trying to make sense of the organization as a whole. She explained, "What is different is the sheer magnitude. When you think about how decisions are made and how things are communicated—who is moving all the pieces? It's harder for me to figure out that system from a birds-eye view because I have less experience being in it."

Perceptions of SIG Partners' Support

Overall, respondents described 12 of the 15 SIG partners with sufficient data in positive terms, reporting that the services, advice, or feedback they received contributed to the school's improvement efforts (see Box 6.8). A district administrator for a school served by 1 of these 12 partners attributed gains in student scores to the professional learning activities that the partner provided, and teachers described their SIG partner positively by saying that feedback was "really helpful," "useful," and provided "right away." One teacher explained:

> *I like the input from the [SIG partner]. They come in…they observe you in the classroom, so they give you like a critique, and it's really good because sometimes you don't realize…that you could be doing something better. Or they give you ideas to make your teaching easier and more beneficial for all the learners.*

Similarly, the instructional coaches at one school described one of their SIG partner's support to the leadership as "wildly helpful" and "very helpful." The SIG partner reportedly helped to create end-of-year goals for the coaching staff related to the theory of action. According to one coach, "It was great to have someone facilitate who was not part of the group. [The SIG partner] helped us gel as coaches

together." The principal also reflected on the usefulness of the external support by saying that the SIG partner helped the coaches to look at their coaching model and apply best practices. In describing the result, she said, "It is really clear who is getting coached. It is very transparent; everyone knows they're going to get coaching at some point this year." The principal, coaches, and school improvement team at another school described the SIG partner as an "invaluable resource" in terms of "vision and planning, aligning professional development, building professional learning communities." One school improvement team member explained that the SIG partner "can see what you can't see. So that is one of the values of [the SIG partner]."

Box 6.8. Perceived Usefulness of SIG Partner Support

School-level classifications on the extent to which respondents perceived the supports provided by SIG partners as useful are based on Year 2 interview and focus group data (see Exhibit B.19 for more detail on the analytic procedures). Although the data used in this analysis primarily focused on the usefulness of SIG partner support specifically related to building human capital, in some cases, respondents spoke about the usefulness of the SIG partner's support as a whole, which may have included other types of support. For this analysis, *respondents* refer to individuals from the following respondent groups: district administrators, principals, teachers, instructional coaches, and external support providers.

Perceived SIG partner supports as useful

- At least two respondents described the SIG partner in predominately positive terms; AND
- No more than one respondent holds a negative perception of the SIG partner.

Mixed perceptions of SIG partner supports

- Respondents disagreed with one another about the usefulness of supports provided by the SIG partner; OR
- Respondents indicated that certain supports provided by the SIG partner were useful, while others were not useful.

Perceived SIG partner supports as not useful

- At least two respondents described the SIG partner in predominantly negative terms; AND
- No more than one respondent holds a positive perception of the SIG partner.

Respondents described the remaining 3 of 15 SIG partners in mixed terms. For example, although the principal at one school asserted that their EMO helped the school in developing and implementing a teacher evaluation tool, they lacked knowledge about budget planning and human resources. One teacher perceived that the EMO provided some "excellent" training activities, but the instructional coach explained, "I don't know that their focus is [for] improving instruction. I know they can identify what's bad and what's good, but I don't know [that] they can identify why it's bad, why it's good, and how they're going to impact what they're seeing. It's just like drive-by."

Chapter Summary

This chapter described the types of supports related to human capital that core sample schools received from their district and external support providers, and how useful the schools found these supports in facilitating their improvement efforts. Respondents from all 22 schools and 13 districts included in this analysis reported that their district provided some form of assistance, such as professional learning

activities for teachers (20 schools) or principals (15 schools), supportive staffing policies (14 schools), or data use structures (13 schools) to help build school capacity. Some larger, urban districts chose to reorganize their SIG and low-performing schools into sub-districts, and other districts chose to assign specific central office staff to support SIG implementation and school turnaround more generally. In both types of districts, school leaders described receiving more supports than in those districts without such organizational structures in place. However, this finding does not necessarily mean that such organizational structures actually led to better district support since many contextual factors, including district size, location, and the historical relationship that existed between district administrators and school leaders, may also be relevant. Overall, respondents from 10 of the 21 core sample schools with sufficient data indicated that the support they received from the district was useful, but respondents in 8 schools described mixed perceptions of their district's support, and respondents from 3 schools reported that the district's support (or lack thereof) was constraining their efforts to improve school capacity.

Similarly, all 25 core sample schools reported receiving support from at least 1 external provider. The types of support varied but were most often related to professional learning (25 schools) or curriculum and instruction (20 schools). Across the 25 schools, respondents identified 53 external partners that supported the development of human capital, and respondents in 13 of the 25 schools identified SIG partners that were taking a more significant role in supporting the school improvement process. In this subset of schools, external providers generally provided intense, ongoing support, and appeared to be at least moderately experienced in the areas in which they were providing support. Although we cannot determine whether these SIG partners succeeded in building human capital in these schools, school respondents described the majority of these partners (12 of the 15 SIG partners with sufficient data) as valuable resources offering useful insights and assistance in the school change process.

Chapter 7: Conclusion to Part II

One possible reason persistently low-performing schools remain low-performing for a number of years is that they lack the necessary capacity to improve on their own. Consistent with this hypothesis, the SIG intervention models specify improvement actions intended to help build human capital in these schools—through hiring new staff, providing professional learning opportunities, and providing external support (U.S. Department of Education, 2012). In Part II of this report, we have described the extent to which our 25 core sample SIG schools appeared to put forth effort to build human capital during the first two years of SIG. The human-capital-building activities we individually analyzed were:

- Chapter 3: Principal replacement, distributed leadership
- Chapter 4: Teacher replacement, adding new noninstructional staff positions
- Chapter 5: Professional learning opportunities, structures, and supports for data use and collaboration
- Chapter 6: District support, external support providers

We conclude this part of the report by synthesizing the various efforts that schools reported making in the areas above and consider whether some schools put forth more or less overall effort in their human-capital-building activities. We first look at our quantitative measure that aggregates the efforts of each school in the activities above. We then present narrative case studies of two core sample schools to provide a qualitative perspective on building human capital overall. We conclude with a brief summary of Part II findings.

Box 7.1. Key Chapter 7 Findings

- In addition to variation in the specific activities that each school implemented (as reported on in Chapters 3 to 6), our aggregate measure suggests variation across schools in the number of efforts to build human capital during the first two years of SIG. Aggregate ratings of school efforts to build human capital ranged from 2.5 to 8.5 out of a maximum possible rating of 10.
- The most common approach to building human capital among core sample schools was adding noninstructional staff positions. All but one core sample school reported adding such staff in either Year 1 or 2 of SIG, and 13 of these schools reported adding such staff in both years.
- The four schools in which respondents described SIG as the primary impetus for change in Year 1 of SIG (see Le Floch et al., 2014) had a higher aggregate score of human-capital-building efforts than did schools in which SIG was not perceived to be an impetus for change.

Efforts to Build Human Capital: An Aggregate View

Based on the findings reported in Chapters 3 to 6, all 25 core sample schools reportedly engaged in at least some efforts to build human capital during the first two years of SIG. They replaced teachers to varying degrees, added noninstructional staff, and in some cases, moved staff within the school to better meet students' needs. Many teachers in these schools reported engaging in a high volume of professional learning opportunities, and in at least some schools, these opportunities appeared to be aligned with school needs and goals. Some schools also reported developing policies and structures that supported data use, collaboration, and distributed leadership. Finally, districts identified individuals or

established sub-districts through which SIG schools could receive targeted support—although some schools perceived their district context to be constraining rather than supportive.

To better understand each school's overall efforts and the differences among them, we developed an aggregate measure that combined the individual results of selected analyses presented in Chapters 3 to 6 (see Box 7.2). Briefly, we credited schools for efforts to build human capital if the findings presented in Chapters 3 to 6 showed schools or districts engaging in specific human-capital-building activities. Specific indicators include:

- Efforts to build structures for distributed leadership (see Chapter 3 and Exhibit B.3)
- Replacement of 50 percent of teachers (see Chapter 4 and Exhibit B.4)
- Creation of nonteaching staff positions (see Chapter 4 and Exhibit B.6)
- Purposeful approach to staffing (see Chapter 4 and Exhibit B.7)
- Alignment of professional learning with school goals and needs (see Chapter 5 and Exhibit B.10)
- Hours of teacher-reported professional learning (see Chapter 5)
- Efforts to build structures to support teacher collaboration (see Chapter 5 and Exhibit B.11)
- Efforts to build structures to support data use (see Chapter 5 and Exhibit B.12)
- Presence of district organizational structures (e.g., sub-districts or designated staff to support SIG schools) (see Chapter 6 and Exhibit B.14)
- Presence of SIG partner to support school (see Chapter 6 and Exhibit B.17)

Box 7.2. Aggregate Measure of Efforts to Build Human Capital

For each capacity-building indicator, analysts ascribed numeric values to the classifications, which were summed to create an aggregate index of capacity-building efforts, with a maximum possible score of 10 (see Exhibit B.20 for more detail on the analytic procedures). Most indicators were scored according to a binary system, with 0 assigned to the negative category (e.g., "no evidence," "not identified") and 1 to the affirmative category (e.g., "identified"). For example, schools rated as having a "purposeful approach to staffing decisions" were assigned a 1, and schools rated as having "no evidence of a purposeful approach to staffing decisions" were assigned a 0. The only indicators that did not follow this binary system were:

- *Mean hours of teacher-reported professional learning.* Although scored according to a binary system, 0 represents below 111 hours and 1, at or above 111 hours [Based on the National Longitudinal Study of *NCLB*, the national estimate of the average number of PD hours for teachers in Title I schools identified for improvement was 111 hours (Taylor et al., 2010)].
- *Creation of nonteaching staff positions.* This indicator was scored using a three-point scale with 0 assigned to schools that added non-instructional staff positions in Year 1 only, 0.5 assigned to schools that added non-instructional staff positions in Year 2 only, and 1 assigned to schools that added non-instructional staff in both years.
- *Alignment of professional learning with school goals and needs.* This indicator was scored using a three-point scale with 0 assigned to schools rated as minimally or not aligned, 0.5 assigned to schools rated as moderately aligned, and 1 assigned to schools rated as aligned.

Note that this measure reflects an *effort* to build capacity, not whether a school actually improved capacity. For example, with regard to the number of professional learning hours, the most we can conclude is that schools in which teachers reported receiving a large number of professional learning

hours exerted some effort to build teachers' knowledge and skills, but we do not know whether the professional learning was of high quality or if it actually enhanced human capital. Also note that this measure may oversimplify and obscure important aspects of the capacity-building process in some cases. For example, school leaders might reasonably opt to focus on a few leverage points rather than across-the-board efforts. Nevertheless, since SIG prescribes numerous activities for its grantees under each model, we believe that this aggregate perspective provides information on each school's holistic efforts to build human capital that would be lost if we were only to consider each activity in isolation.

In addition to variation in the specific activities that each school implemented (as reported on in Chapters 3 to 6), our aggregate measure suggests variation across schools in the number of efforts to build human capital during the first two years of SIG (see Exhibit 7.1). Overall, the aggregate ratings of school efforts to build human capital ranged from 2.5 to 8.5 out of a maximum possible rating of 10, with 12 schools scoring above 6, and 13 scoring 6 or below. There was no apparent association between a school's aggregate measure of efforts to build human capital and its SIG intervention model, external context, urbanicity, or teachers' average years of experience.

The most common approach to building human capital was adding noninstructional staff positions (see Exhibit 7.1). All but one core sample school reported adding staff in either Year 1 or 2 of SIG, and of these schools, 13 reported adding staff in both years. In addition, 19 of the 25 core sample schools developed structures and policies to support data use for instructional decisions, an approach consistent with the SIG transformation and turnaround models. Relatively fewer schools (13) identified an external organization or individual they had hired specifically to support them throughout the turnaround process, despite SIG's emphasis on seeking support from external partners.

The four schools in which SIG was described as an impetus for change in Year 1 of SIG (see Le Floch et al., 2014) had somewhat higher average ratings than schools in which SIG was not an impetus for change (7.75 vs. 5.67). To better understand how multiple human-capital-building efforts fit together in each school and how they can be influenced by the specific context within which each school is situated, we have included case study profiles for 2 of the 25 core sample schools (see Box 7.3 and Box 7.4), selected because they were situated in different contexts and fell on different ends of our aggregate scale.

Exhibit 7.1.
Aggregate Measure of School Efforts to Build Human Capital, 2010–11 and 2011–12

	Efforts to Build Structures for Collaboration	Efforts to Build Structures for Data Use	Efforts to Build Structures for Distributed Leadership	Replaced Teachers	Added Non-instructional Staff Positions	Purposeful Approach to Staffing	Purposeful Approach to Professional Learning	Mean Hours of Professional Learning	District "Zone" or Staff to Support SIG	SIG Partner	Overall Aggregate Score
Paul Bunyan High	no	no	no	no	Yr 1	no evidence	minimally purposeful	36	yes	SIG partner	2.5
West Marble High	no	no	no	yes	Both	no evidence	minimally purposeful	112	no	none	3
Raven Ridge Elementary	no	yes	no	no	Yr 2	no evidence	minimally purposeful	136	no	SIG partner	3.5
Melon Elementary	no	yes	no	no	Yr 2	no evidence	moderately purposeful	99	yes	none	4
Coral High	yes	yes	yes	no	no	no evidence	moderately purposeful	100	yes	none	4.5
Sherbrooke Elementary	no	yes	no	no	Both	no evidence	moderately purposeful	120	no	SIG partner	4.5
Peregrine Elementary	no	yes	yes	yes	Yr 1	no evidence	moderately purposeful	96	yes	none	5
Proctor Point High	yes	yes	no	no	Yr 1	purposeful	moderately purposeful	224	no	none	5
Elmsville High	no	no	yes	no	Both	no evidence	highly purposeful	134	yes	none	5
Tyro Trail Elementary	no	yes	no	yes	Yr 1	purposeful	minimally purposeful	127	yes	none	5.5
Sawbuck Elementary	yes	yes	no	yes	Both	no evidence	moderately purposeful	105	no	SIG partner	5.5
Aerovista High	yes	yes	no	no	Yr 1	purposeful	moderately purposeful	117	yes	none	6
Rossignol Elementary	yes	no	yes	no	Both	purposeful	highly purposeful	143	no	none	6
Tyron Elementary	yes	no	yes	yes	Both	no evidence	moderately purposeful	108	yes	SIG partner	6.5
Inner Brooks High	yes	yes	yes	yes	Yr 2	no evidence	highly purposeful	126	no	none	6.5
McAlliston High	yes	no	yes	no	Both	no evidence	moderately purposeful	169	yes	SIG partner	6.5
Haven Way Elementary	yes	yes	yes	no	Yr 1	purposeful	moderately purposeful	178	yes	none	7
Gale Secondary	yes	yes	yes	no	Both	purposeful	moderately purposeful	70	yes	SIG partner	7.5
Blizzard Bay Elementary	yes	yes	yes	no	Yr 2	purposeful	highly purposeful	91	yes	SIG partner	7.5
Big Acorn High	no	yes	yes	yes	Both	purposeful	moderately purposeful	97	yes	SIG partner	7.5
Sterling Slope Elementary	yes	yes	yes	yes	Yr 2	purposeful	moderately purposeful	192	yes	none	8
Baltimore Bridge Elementary	yes	yes	no	yes	Both	purposeful	highly purposeful	130	no	SIG partner	8
Gillepsie High	yes	yes	yes	no	Both	no evidence	highly purposeful	155	yes	SIG partner	8
Island Bay Elementary	yes	yes	yes	yes	Both	no evidence	moderately purposeful	201	yes	SIG partner	8.5
Meribel High	yes	yes	yes	yes	Both	purposeful	moderately purposeful	183	no	SIG partner	8.5

Source: SST respondent interviews and focus groups, spring 2011 and spring 2012; SST teacher survey, spring 2011 and spring 2012.
Notes: Includes 25 core sample schools. All school names are pseudonyms.

Box 7.3. Gale Secondary's Efforts to Build Human Capital

Gale Secondary is located in a rural community about 15 miles from a somewhat larger town in a relatively isolated part of the state. The area, as described by the principal, is economically depressed and was hit extremely hard during the recession because its agricultural and industrial base "dried up and disappeared." The nearby downtown is small and rather quiet. There are a few areas of activity, but many storefronts are either run-down or closed. Coinciding with the recession, focus group respondents frequently voiced concern about unemployment, which rose to double-digit levels during SIG.

The principal in Year 1 of SIG (2010–11) was perceived to be a weak instructional leader with limited communication skills. With regard to his vision for the school and the use of SIG funding, the principal was described as unfocused, simply expressing a willingness to use the funds for any and all "legally allowable" purposes. SIG funding in Year 1 appeared to support a "business-as-usual" approach to addressing performance problems, with modest changes, if any, to prior activities. In Year 2 (2011–12), a new principal (who had previously taught at Gale) was welcomed by the faculty. Teachers cited his motivation, open-door policy, and instructional leadership as strengths, and teachers openly noted an upgrade in leadership compared with the previous principal.

According to the new principal, his staff made "a major upgrade" in Year 2, explaining that he had "been able to transfer out two or three teachers that did not need to be here" and had made "major upgrades in those areas…that's going to pay off over the long run." Several members of the school improvement team reported that the quality of teachers was improving and that school administrators were conscientiously seeking staff that "fit" with the school. This perspective was shared by the ninth-grade academy coordinator, who explained that the principal was doing "a really good job" replacing staff and evaluating potential new staff members, adding that "He does a really good job corresponding with our LEA, our district office, about what he wants and what he needs to be successful in the school."

Also of note with respect to staff skills, the school introduced a new policy of placing the weakest students with the strongest teachers as a means to leverage teacher strengths. During extended learning time (i.e., afterschool tutoring and Saturday Academy), for example, students rotate among teachers on the basis of the teachers' strengths. As expressed by the principal, "We're trying to be very prescriptive in what we do and trying to put the strongest teacher we have for the weaknesses they have. And we're doing that across the board."

With regard to professional learning, teachers at Gale participated in fewer professional learning hours than did teachers in other schools, but there is evidence that professional learning opportunities were aligned with school needs and goals. Gale focused on three areas of professional learning: Common Core State Standards (reported by teachers, the principal, and the curriculum specialist), technology (reported by teachers and the principal), and opportunities for teachers to engage in depth in their subject areas (reported by the curriculum specialist and teachers). Areas for professional learning were aligned with district and principal priorities, as well as needs identified by teachers. For example, the instructional coach reported administering a survey to capture staff development needs. With the assistance of the SIG partner, the school developed a professional learning plan for literacy aligned with the district's push for literacy.

In summary, through staff replacement, allocation of teachers' skills, professional learning, and the support of an external partner (among other supports), Gale appeared to make multiple efforts to build human capital (aggregate score of 7.5), most of which occurred in the second year of SIG.

Box 7.4. Raven Ridge Elementary's Efforts to Build Human Capital

In contrast to Gale Secondary, Raven Ridge Elementary is located in an urban context that was categorized as traumatic (see Le Floch et al., 2014). Reports of violence in the community were common, as were instances of student neglect and teen pregnancy. The principal, new to the school in Year 1 of SIG (2010–11), commented that many of the parents of her students were teens themselves who had attended the elementary school fairly recently. Raven Ridge implemented the restart model and was being operated by an education management organization. This transition, decided upon by the school district, was extremely unpopular with the school community and the remaining school staff. The EMO (Raven Ridge's SIG partner) recruited and hired the new principal in the summer prior to SIG, removing a longstanding principal who was popular with the community. As a result, nine teachers requested voluntary transfers. The principal was also new to the district, which reportedly made her first year at the school much more challenging because she was required to abide by two new sets of policies and processes: those from the school district and those established by the SIG partner.

Despite some teachers leaving Raven Ridge, many of the pre-SIG teachers had not changed. From the principal's perspective, the quality of her teachers was of primary concern. In an interview from 2011, she commented, "All the research says the teacher is the one that makes the most difference. We have maybe, honestly, six or seven, and that's generous, teachers on this campus that are truly competent."

Given the principal's comments, one might expect that Raven Ridge was engaged in a variety of efforts to increase human capital. However, with an aggregate score of 3.5, we did not find this to be the case. Although teachers reported participating in a high volume of professional learning activities (136 hours), these sessions were not described as effective by teachers. The principal, SIG partner, and instructional coaches all identified a number of efforts to build structures for data use (e.g., benchmark assessments in English language arts and math, student data systems supported by the district), but the teacher collaboration time that was needed to use these data structures effectively was often reportedly absent. In 2011–12, the principal, instructional coaches, teachers, and the SIG partner explained that time was set aside once a week for professional learning and teacher collaboration. However, the coaches mentioned that collaboration time was not used consistently and that it was often shortened or usurped for other purposes. Teachers also reinforced that they did not get sufficient time to plan or collaborate. The apparent lack of distributed leadership at the school, as well as the minimally purposeful efforts to connect staffing and professional learning to school needs, appeared to make efforts to build human capital at Raven Ridge more challenging.

In summary, Raven Ridge was situated in a school and district context that remained challenging during its first two years of SIG. The principal, new to the district and the school, attributed the school's history of low performance mostly to its incompetent teachers. Consequently, she focused her efforts at building human capital on providing professional learning opportunities and setting up structures to support collaboration and data use. These efforts were implemented imperfectly, with teacher collaboration time often replaced with other activities and professional learning activities perceived by many as ineffective or not executed well.

Chapter Summary

SIG policy includes some mandates that are explicitly tied to assumptions about human capital in low-performing schools. The requirement to replace principals (turnaround and transformation model) assumes that existing principals do not have sufficient knowledge and skills and have been unsuccessful in creating high levels of organizational capacity. The requirement to replace teachers (turnaround model only) assumes that existing teachers are not able to do their jobs well. The encouragement of external partnerships (especially with the restart model) assumes that districts do not have the internal capacity to adequately support their persistently low-performing schools.

However, the data from interviews and focus groups discussed in Chapters 3 to 6 reveal the complexities and unanticipated consequences of such mandates. Depending on the historical context of the school and the current policies and conditions, staffing transitions—both for teachers and principals—had unforeseen complications. Our analyses from these chapters also showed that new leaders were not always a good fit for the school, and they often left for other professional opportunities or for personal reasons. New, less experienced teachers sometimes created a positive culture shift, but district staffing policies also did not always protect these young educators from layoffs. Some districts were forced to replace underperforming teachers at a SIG school with equally poor teachers from another. Such actions reportedly created instability and potentially sabotaged capacity-building efforts.

At the district level, administrators reported that changes to governance structures or new SIG positions allowed for an increase in the number of support services for SIG schools. However, fewer than half of SIG school principals in our core sample perceived these district supports as useful to the overall improvement process. Moreover, some school respondents explained that instability among district administrators hindered or stalled improvement processes underway in SIG schools.

Although our study methodology does not permit inferences regarding actual improvement of teacher knowledge and skills, the survey data suggest that teachers felt they were learning from the professional learning activities in which they participated. Overall, teachers reported participating in large amounts of professional learning, both job-embedded and traditional, with many schools offering more hours than the national average for low-performing schools. Also, survey results showed that teachers in most core sample schools reported learning and changing practice in at least one content area. In schools where our qualitative data allowed us to understand whether the school was specifically targeting a certain type of professional learning, we frequently found that high percentages of teachers reported learning and changing practice in those areas.

Overall, our data indicate that the 25 core sample schools engaged in many activities intended to build human capital, both in compliance with SIG requirements and as part of each school or district's own decisions about how to best address capacity issues. The majority of the schools in this sample sought to build human capital and to adhere to the requirements of the grant they had been awarded. In Part III of this report, we will explore the extent to which these efforts were associated with any apparent changes in organizational capacity by the end of SIG.

Part III: Change and Sustainability

Chapter 8: Changes in Improvement and Organizational Capacity

In this chapter, we focus on 12 of the 25 core sample schools, which we collectively refer to as the core subsample,[44] to address the following questions:

1. Do teachers perceive their schools to have improved over the course of SIG?
2. Have schools' levels of organizational capacity changed over the course of SIG?
3. Are schools' efforts to build their human capital related to changes in organizational capacity?

Building on Part II, which described the efforts schools reported putting forth to try to spur change, this chapter focuses on two leading indicators of change: perceived improvement and organizational capacity to improve student learning. The Part II measures can be considered *inputs* to the change process, while this chapter's measures can be considered *intermediate outcomes* in the change process. Actual measures of student achievement can be considered *ultimate outcomes*, but as noted in Chapter 1, they are not a focus of this study.

Box 8.1. Key Chapter 8 Findings

- Most teachers in 7 of the 12 core subsample schools reported on the Year 3 teacher survey that their school had changed in primarily positive ways throughout the course of SIG.
- The quality of leadership in the 12 core subsample schools appears to be related to teachers' perceptions of school improvement, based on data from the teacher survey and site visits.
- In Year 3, five schools received a higher organizational capacity score, six received a moderate capacity score, and one received a lower capacity score based on our summative ratings of schools' organizational capacity.
- A school's level of organizational capacity during the first year of SIG appears to be related to the amount of improvement in the school's level of organizational capacity from Year 1 to Year 3. Core subsample schools that had lower organizational capacity in Year 1 tended to improve their capacity by Year 3. Schools that had moderate or higher capacity in Year 1 tended to maintain their moderate or higher level of capacity by Year 3.
- Core subsample schools that appeared to make more effort to build human capital in Years 1 and 2 of SIG were more likely to improve their capacity (or sustain their already higher capacity) than schools that appeared to make less effort to build human capital.

[44] We selected a subset of 12 of the 25 core sample schools in Year 3 to facilitate more in-depth analyses of the change process across all 3 years of SIG. See Chapter 2 for more details on the core subsample and related procedures.

Perceived Improvement

SIG was intended to be a significant intervention for persistently low-performing schools, catalyzing dramatic action and yielding perceptible improvements. Although this study does not consider whether SIG improved student outcomes, we did collect qualitative and quantitative data on respondents' perceived improvement in elements of organizational functioning and educational practice during the three years of SIG (see Le Floch et al., 2014). These elements may reflect changing conditions in the schools over time, and studies have frequently found them to be associated with improved student outcomes (see Bryk et al., 2010; Herman et al., 2008). While perceptions do not necessarily correlate with more objective measures of change, they could influence how respondents subsequently relate to and participate in the improvement process. Teachers and administrators who perceive improvement may become more committed to reforms, increase their own perceptions of efficacy, and increase their motivation to sustain the improvement process. Such patterns are consistent with theory on employee motivation and organizational change (Lawler, 1994; Mohrman & Lawler, 1996).

Drawing on teacher survey responses in Year 3 of SIG, we focus on respondents' perceptions of overall improvement over the course of SIG and explore school-level associations based on site visit data from district administrators, principals, teachers, instructional coaches, school improvement teams, and students.

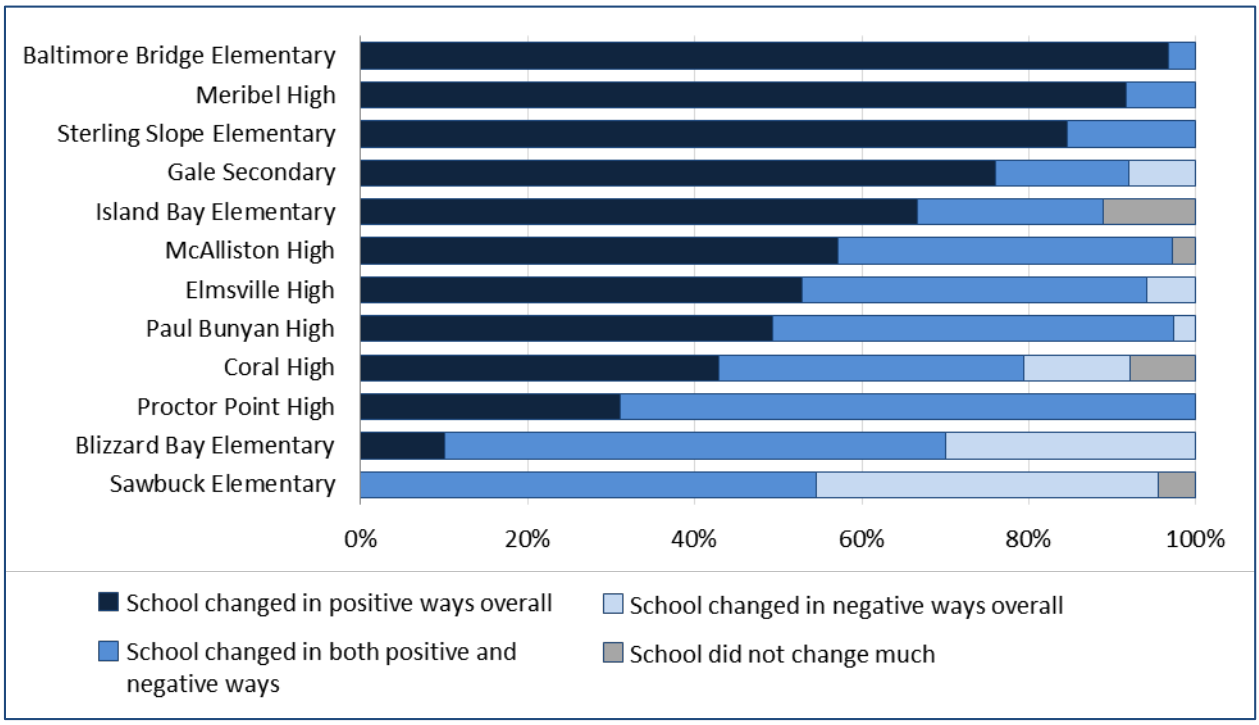
Overall Perceived Improvement in Core Subsample Schools

The teacher survey administered in Year 3 of SIG (2012–13) asked teachers to assess the overall improvement in their schools with the following question: "Do you believe that your school has undergone changes over the past three years?" Teachers were asked to indicate if they felt that their school had changed in primarily positive ways, both positive and negative ways, primarily negative ways, or if the school had not changed much over the course of SIG.

Most teachers in 7 of the 12 core subsample schools[45] reported that their schools had changed in positive ways (see Exhibit 8.1). Across all 12 schools, the average percentage of teachers who reported overall positive improvement was 53 percent, compared with 8 percent of teachers who reported negative changes overall. There was, however, variation across schools, with the percentage of teachers who reported that their school had changed in primarily positive ways ranging from 0 percent in one school to 97 percent in another.

[45] On the Year 3 teacher survey, teachers were asked to respond to the following question: "Do you believe that your school has undergone changes over the past three years?" Teachers who responded *I do not know how the school has changed over the past three years* were not included in these analyses.

Exhibit 8.1.
Overall Perceived Improvement During SIG, by Core Subsample School, 2010–13



Source: SST teacher survey, spring 2013
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

Overall Perceived Improvement and Principals' Leadership in Core Subsample Schools

Leithwood et al. (2004) found that "there are virtually no documented instances of troubled schools being turned around in the absence of intervention by talented leaders…. While other factors within the school also contribute to such turnarounds, leadership is the catalyst" (p. 17). Data from the Year 3 teacher survey and site visits do indeed suggest an association between the quality of principal leadership in these schools and teachers' perceptions of improvement (see Le Floch et al. [2014] and Exhibits B.21, B.22, and B.23 for more detail on the analyses of principal leadership).

In Year 3 of SIG, teachers in all 3 of the 12 core subsample schools whose principals were reported as exhibiting higher levels of teacher trust and overall leadership (including transformational, instructional, and strategic leadership) also reported the highest levels of perceived improvement over the three years of SIG (see Exhibit 8.2; see Le Floch et al. [2014] for more detail on the analyses of principal leadership). Conversely, the four core subsample schools with the lowest aggregate ratings across our leadership measures were also the ones whose teachers reported the lowest levels of perceived improvement over the course of SIG.

Exhibit 8.2.
Summary of Teachers' Perceived Improvement and Principals' Leadership, by Core Subsample School

	Percentage of Teachers Reporting Improvement	Years of Principal Replacement	YEAR 1 Teacher Trust in Principal	YEAR 1 Overall Leadership Rating	YEAR 3 Teacher Trust in Principal	YEAR 3 Overall Leadership Rating
Baltimore Bridge Elementary	97	Year 1	High	High	High	High
Meribel High	92	Year 2	Moderate	Moderate	High	High
Sterling Slope Elementary	85	Year 2	High	High	Moderate	High
Gale Secondary	76	Year 2	Moderate	Low	Moderate	Moderate
Island Bay Elementary	67	Year 1 Year 2	Low	Low	Moderate	Moderate
McAlliston High	57	No change	High	Moderate	Moderate	Moderate
Elmsville High	53	Year 1	Moderate	Moderate	Moderate	Moderate
Paul Bunyan High	49	Year 3	Moderate	Moderate	Moderate	Moderate
Coral High	43	Year 1 Year 2	High	Moderate	Low	Moderate
Proctor Point High	31	No change	High	Moderate	Moderate	Moderate
Blizzard Bay Elementary	10	Year 1	Low	Moderate	Low	Moderate
Sawbuck Elementary	0	Year 1 Year 3	Moderate	Moderate	Low	Low

Source: SST teacher and instructional coach interviews, and teacher and school improvement team focus groups, spring 2011 and spring 2013; SST teacher survey, spring 2011 and spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms. McAlliston High did not meet the 50 percent response rate threshold on the teacher survey in Year 1, so the classifications for the school's Year 1 indicators are based on a lower response rate and should be interpreted with this caveat. Due to insufficient data on transformational and instructional leadership, for two schools in Year 1 (Gale and Meribel), the leadership rating is based on the measure of strategic leadership only.

Respondents from each of the three schools reporting the highest ratings of leadership quality in Year 3 spoke to the principal's commitment to the school, staff, and students. For example, at Meribel High, which replaced its principal in Year 2, the sense of campus community appeared to stem from the principal's own dedication to the school. The instructional coach explained that the prior principal's view of his role was that "it's just a job, and it's just a stepping stone to get me somewhere else," whereas the current principal said, "It's more like a calling. This is what I'm supposed to be doing. I'm supposed to be helping this site. I'm supposed to be doing as much as I can to support and get them off on the right direction." At Baltimore Bridge Elementary, the principal was new to the school in Year 1 and focused on building structures and relationships at the school. One district administrator described the principal as "young but phenomenal at motivating his staff. He is also really great at understanding the value of making everyone around him real drivers. We sometimes see principals who try to do everything. [He] has been strategic in how he uses his assistant principals, giving them big pieces to own and drive so that they can be more effective as a team." Respondents at Sterling Slope Elementary also spoke to the principal's level of commitment and dedication to the school. The school's instructional coach characterized the principal as "full of energy. Wanting to succeed…she wants all of us to succeed. She looks out for the school. Her heart and soul is in the school. She's the first one in and the last one out."

In contrast, respondents at Sawbuck Elementary, a school with one of the lowest reported levels of perceived improvement over the course of SIG, described the new principal in Year 3 as a primary factor for the school's setbacks. In the first two years of SIG, this school was led by a principal who was rated

"mid-high" on strategic leadership (Le Floch et al., 2014). However, the principal who was new to the school in Year 3 was rated relatively low across various measures of leadership. One school improvement team member described a desire for the new principal to "take ownership":

> *As a leader, take ownership of stuff that needs to happen. There are systems that used to exist that don't happen anymore…. As a leader, you are that point person to get it off the ground. It has been lazy this year, "It doesn't really matter." That is the motto this year. I don't feel a sense of caring—not from teachers, not from home, not from leadership.*

We similarly examined whether there were any apparent associations between perceived improvement and school level (elementary versus high school), SIG intervention model, external school context, or overall per-pupil SIG award levels, which did not yield any apparent associations.

Changes in School Organizational Capacity

In addition to looking at teachers' perception of improvement, we also examined how indicators of school organizational capacity changed over the course of SIG. Positive changes in capacity could be precursors to improved student outcomes and part of a sustained process of continuous improvement.

"Developing and building capacity" is commonly cited as a strategy for helping low-performing schools improve (Fuhrman, Goertz, & Duffy, 2004; Mintrop & Trujillo, 2005), although the term *capacity* is used in different ways by researchers and policymakers alike. Some research focuses on expanding our understanding of teacher capacity to include the multidimensional aspects of human capital (which include teachers' skills, knowledge, and dispositions) as well as the broader facets of organizational capacity (such as the vision and leadership of a school, the collective commitment and cultural norms of the staff, the collective knowledge or access to knowledge of the organization, and the organizational structures and management of the school) that may impact the capacity of teachers (O'Day et al., 1995). Other researchers build on this notion of interconnectivity and posit a component-based definition of capacity, which consists of human capital, social capital, program coherence, and resources (Beaver & Weinbaum, 2012). Despite these differences, all existing frameworks portray school capacity as having multiple, interconnected attributes.

Drawing on site visit data from district administrators, principals, teachers, instructional coaches, school improvement teams, parents, and students, our measure of organizational capacity focuses on eight leading indicators, or forms of capacity that schools can leverage to improve teaching and learning, namely the principal's leadership skills, the coherence among school strategies and goals , the presence of clear and shared goals, the prevalence of teacher collaboration structures and routines, the level of trust among teachers, the safety and orderliness of the school environment, the prevalence of data use structures and routines, and the extent to which school leaders and staff assume responsibility for the school's performance problems (see Box 8.2; see also Exhibit B.28 and Appendix D for further details on this aggregate measure and each indicator). We were unable to collect data on all potentially important leading indicators suggested by prior research—such as changes in teachers' knowledge and skills, changes in curricula and instruction, and level of resources, among others (Newmann et al., 1997; O'Day et al., 1995). Furthermore, our measure of organizational capacity is not an absolute measure of capacity, but rather a measure intended to capture capacity to improve student learning relative to the other schools in our core subsample. Even the higher capacity schools in our sample may have low capacity relative to a broader sample of schools. These caveats should be kept in mind when interpreting our findings in this section.

Box 8.2. Organizational Capacity in Core Subsample Schools

Our measure of organizational capacity (see Le Floch et al., 2014) includes the following eight indicators:

- **Leadership** (see Exhibits B.21-B.23), specifically the extent to which principals exhibit skills in providing transformational leadership, instructional leadership, and strategic leadership. The first two measures were based on survey and qualitative data from teachers, instructional coaches, and school improvement teams, the third solely on qualitative data from principals. Taking into account all dimensions, school leaders were classified as high, moderate, or low.
- **Coherence** (see Exhibit B.28), or the degree to which the policies of a school reflect consistent goals; the strategies employed are clearly designed to foster achievement of these goals; and barriers and detractors from goals and strategies are systematically removed (Honig & Hatch, 2004; Newmann et al., 2001). Categorizations for coherence were based on three teacher survey items related to programmatic coherence. For each item, schools were assigned numeric values based on the school mean relative to the overall mean, which were summed to create a coherence index, consisting of high, moderate, and low classifications.
- **Clear and shared goals** (see Exhibit B.28), including the extent to which school leaders and staff have unity of purpose, explicit expectations, and shared values for student learning and success (Purkey & Smith, 1983; Newmann et al., 2001). Based on the shared goals survey scale, schools were classified as high, moderate, or low.
- **Teacher collaboration** (see Exhibit B.24), often described in the literature as either same-subject teachers "identifying a common curriculum, and then analyzing common assessment data to make instructional changes" (DuFour, 2004b) or as teachers of the same students, but of different subjects, working together (Erb & Doda, 1989; Rottier, 2001). This measure is based on qualitative data from principals, teachers, and instructional coaches as well as teacher survey items concerning the extent to which teachers have established collaboration structures and routines. Based on both data sources, schools were classified as having a culture of collaboration, some collaboration, or inconsistent collaboration.
- **Teacher-teacher trust** (see Exhibit B.28), or the extent to which teachers feel they have mutual respect for each other, for those who lead school improvement efforts, and for those who are experts at their craft (Consortium on Chicago School Research, 2004). Based on the teacher-teacher trust survey scale, schools were classified as high, moderate, or low.
- **Safe and orderly climate** (see Exhibit B.25), or the presence of an environment in which students "have a sense of being physically and psychologically safe in their school" (Consortium on Chicago School Research, 2004, Student-Centered Learning Climate section). Based on qualitative data from district administrators, principals, teachers, instructional coaches, students, and parents, schools were classified as safe/orderly, mixed, or unsafe/disorderly.
- **Use of data for instructional decisions** (see Exhibit B.26), characterized as the presence of structures and routines for monitoring student learning and engaging in frequent and transparent use of student outcome data to guide instructional decisions (Coburn & Beuschel, 2012; Coburn & Turner, 2011a; Coburn & Turner, 2011b). Based on qualitative data from district administrators, principals, teachers, and instructional coaches, schools were classified as high, medium, or low.

Box 8.2. Organizational Capacity in Core Subsample Schools

(continued from previous page)

- **Locus of responsibility** (see Exhibit B.27), characterized as the extent to which school respondents attributed the performance problem in their school to factors within their control (i.e., internal causes) as opposed to outside of their control (i.e., external causes). Based on qualitative data from principals and teachers, schools were classified as having internal responsibility, limited internal responsibility, or external responsibility.

For each indicator, we assigned numeric values to the classifications (0 for the lowest category, 1 for the middle category, and 2 for the highest category), which were summed to create an aggregate index of school capacity. School classifications on the overall level of organizational capacity are described below (see Exhibit B.28 for more detail on the analytic procedures).

Higher capacity

- Received a summative rating of at least 10 out of 16 on the school capacity index.

Moderate capacity

- Received a summative rating of 8 or 9 out of 16 on the school capacity index.

Lower capacity

- Received a summative rating of less than 8 out of 16 on the school capacity index.

The summative ratings of capacity in the core subsample schools for Year 3 of SIG ranged from 7 to 15. Exhibit 8.3 displays overall capacity ratings for each school in Year 1 and Year 3 of SIG. It also shows the ratings separately for each of the eight leading indicators.

Overall in Year 3, five schools received a higher capacity score, six received a moderate score, and one received a lower score. Within each rating category, schools varied among a number of characteristics, including school enrollment, school level (elementary, high), SIG model (transformation, turnaround, restart), and external context (benign, depressed, traumatic).

We found two factors that appeared to be related to changes in the capacity of our core subsample schools over the course of SIG:[46]

- **Initial capacity in Year 1.** Core subsample schools that had lower organizational capacity in Year 1 tended to improve their capacity by Year 3. Schools that had moderate or higher capacity in Year 1 tended to maintain their moderate or higher level of capacity by Year 3.
- **Efforts to build human capital in Years 1 and 2.** Schools that appeared to make more effort to build human capital in Years 1 and 2 of SIG were more likely to improve their capacity (or sustain their already higher capacity) than schools that appeared to make less effort to build human capital.

[46] We examined several other factors that might be related to organizational capacity—including teacher replacement, principal turnover, principal-teacher trust, per-pupil SIG expenditures, and overall SIG award level—and found no apparent relationships.

Exhibit 8.3.
School Classifications on Leading Indicators and Overall Organizational Capacity, by Core Subsample School, 2010–11 and 2012–13

	Leading Indicator																Overall Capacity Score		Overall Capacity Rating	
	Leadership		Coherence		Clear and Shared Goals		Teacher Collaboration		Teacher-Teacher Trust		Safe and Orderly Climate		Use of Data		Locus of Responsibility					
	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3	Yr 1	Yr 3
Blizzard Bay Elementary	Moderate	Moderate	Lower	Moderate	Lower	Lower	Some	Some	Moderate	Moderate	Unsafe and disorderly	Mixed	Lower	Higher	Limited internal	Limited internal	4	8	Lower	Moderate
Island Bay Elementary	Lower	Moderate	Lower	Lower	Lower	Moderate	Some	Some	Moderate	Moderate	Safe and orderly	Mixed	Lower	Higher	Limited internal	Limited internal	5	8	Lower	Moderate
Elmsville High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Inconsistent	Inconsistent	Moderate	Moderate	Safe and orderly	Safe and orderly	Lower	Moderate	Limited internal	Limited internal	7	8	Lower	Moderate
Gale Secondary	Lower	Moderate	Moderate	Higher	Moderate	Moderate	Some	Culture of collaboration	Moderate	Moderate	Safe and orderly	Safe and orderly	Moderate	Higher	External	External	7	11	Lower	Higher
Coral High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Some	Some	Moderate	Moderate	Safe and orderly	Mixed	Moderate	Higher	External	Limited internal	8	9	Moderate	Moderate
Sawbuck Elementary	Moderate	Lower	Moderate	Lower	Moderate	Moderate	Some	Some	Moderate	Moderate	Mixed	Mixed	Higher	Higher	Limited internal	Limited internal	9	7	Moderate	Lower
Proctor Point High	Moderate	Moderate	Lower	Lower	Moderate	Moderate	Some	Some	Moderate	Moderate	Safe and orderly	Mixed	Higher	Higher	Limited internal	Limited internal	9	8	Moderate	Moderate
Paul Bunyan High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Culture of collaboration	Some	Moderate	Moderate	Mixed	Safe and orderly	Moderate	Moderate	Limited internal	Limited internal	9	9	Moderate	Moderate
McAlliston High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Some	Culture of collaboration	Higher	Moderate	Safe and orderly	Safe and orderly	Moderate	Moderate	Limited internal	Limited internal	10	10	Higher	Higher
Meribel High	Moderate	Higher	Moderate	Higher	Moderate	Higher	Some	Some	Moderate	Higher	Safe and orderly	Safe and orderly	Higher	Moderate	Limited internal	Limited internal	10	13	Higher	Higher
Baltimore Bridge Elementary	Higher	Higher	Higher	Higher	Higher	Higher	Some	Culture of collaboration	Higher	Higher	Unsafe and disorderly	Safe and orderly	Higher	Higher	Internal	Limited internal	13	15	Higher	Higher
Sterling Slope Elementary	Higher	Higher	Higher	Higher	Higher	Moderate	Culture of collaboration	Culture of collaboration	Higher	Moderate	Safe and orderly	Safe and orderly	Higher	Higher	Internal	Internal	16	14	Higher	Higher

Source: SST respondent interviews and focus groups, spring 2011 and spring 2013; SST teacher survey, spring 2011 and spring 2013.
Notes: Includes 12 core sample schools. McAlliston did not meet the 50 percent response rate threshold on the teacher survey in Year 1, so the classifications for the school's Year 1 indicators are based on a lower response rate and should be interpreted with this caveat. Due to insufficient data on transformational and instructional leadership, for two schools in Year 1 (Gale and Meribel), the leadership rating is based on the measure of strategic leadership only. All school names are pseudonyms.

Initial Organizational Capacity in Year 1

Overall, the organizational capacity exhibited by the 12 core subsample schools in Year 3 appeared to be related to their organizational capacity in Year 1 (see Exhibit 8.4). All four of the schools with lower capacity in Year 1 improved to moderate or higher organizational capacity by Year 3. Among the four schools with moderate capacity in Year 1, three remained moderate by Year 3. Similarly, among the four schools with higher capacity in Year 1, all four remained higher by Year 3. Thus, it appears that lower capacity schools tended to improve their capacity over time, while moderate and higher capacity schools tended to maintain a relatively more stable level of capacity. Below, we further discuss the trajectories of schools at both the ends of the spectrum.

Exhibit 8.4.
Organizational Capacity in Year 1 Relative to Organizational Capacity in Year 3

	Lower Organizational Capacity in Year 3	Moderate Organizational Capacity in Year 3	Higher Organizational Capacity in Year 3	Total
Lower Organizational Capacity in Year 1		*3 schools* Blizzard Bay Elementary Island Bay Elementary Elmsville High	*1 school* Gale Secondary	**4 schools**
Moderate Organizational Capacity in Year 1	*1 school* Sawbuck Elementary	*3 schools* Coral High Proctor Point High Paul Bunyan High		**4 schools**
Higher Organizational Capacity in Year 1			*4 schools* McAlliston High Meribel High Baltimore Bridge Elementary Sterling Slope Elementary	**4 schools**
Total	**1 school**	**6 schools**	**5 schools**	**12 schools**

Source: SST respondent interviews and focus groups, spring 2011 and spring 2013; SST teacher survey, spring 2011 and spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

The finding that higher capacity schools were able to at least maintain their organizational capacity is consistent with studies that have demonstrated that existing capacity begets capacity (Beaver & Weinbaum, 2012; Opfer & Peddler, 2013). This view is reflected in many state and federal grants for low-performing schools, which require that eligible schools demonstrate a minimum level of capacity, or "readiness to benefit" (Le Floch & Boyle, 2006). Although our finding is not surprising given this context, it is still relevant to ask how higher-capacity schools in our core subsample were able to at least maintain a relatively higher level of capacity over the course of SIG.

One hypothesis focuses on the coherence of multiple, interconnected supports for school change. Researchers hypothesize that it is not enough for a school to have isolated efforts to build and sustain capacity (Beaver & Weinbaum, 2012; Corcoran & Goertz, 1995). For example, it is not sufficient to have a highly qualified team of teachers if the school lacks effective leadership and a coherent approach to capacity-building efforts. If a school is to succeed in building and sustaining capacity, it ideally needs to exhibit multiple, interconnected features of capacity that collectively help to bring about change. Three of the four schools in our core subsample that were categorized as higher capacity in Year 1 appeared to

adopt such a multifaceted, interconnected approach to improvement and maintained this approach over the course of SIG.

For example, respondents from one of these schools described visionary leaders who rallied the staff around a mission. They also reported that there were structures within the school that allowed for capacity building to take place, such as weekly planning time, weekly data chats, programs that maximized instructional time, and new technology. There was a reported culture of collaboration and high levels of teacher-teacher trust. Improvement efforts were described by teachers as coherent and primarily focused on the instructional core. One teacher at the school described efforts as follows:

> *[The school leaders] are really serious about improving the school. They're pretty ambitious. And, the team that's been put together to bring [the vision] about is very focused on bringing that to a reality, and it's all about raising the rigor…[there is] a focus on moving beyond the procedural and the memorization—[in] actually getting kids engaged with the concepts and the content. I think all the programs…it's meant to all work together, complement each other, striving for that improvement.*

Multiple efforts to build capacity within this school—which included hiring the appropriate leader, hiring the appropriate staff, providing coaching and professional learning opportunities to teaching staff, establishing the necessary infrastructure, and focusing on coherence—appeared to converge simultaneously during all three years of SIG, which may have helped the school to maintain relatively higher levels of capacity.

On the other end of the spectrum, it is relevant to ask how lower capacity schools were able to improve their capacity ratings over the last two years of SIG. One hypothesis is that changes or interventions in one or more areas within a school may have the potential to influence changes in other areas of organizational functioning (Axelrod & Cohen, 1999). For example, in three of the four core subsample schools with lower capacity ratings in Year 1, a new leader appeared to play a major role in triggering changes within the school in subsequent years of the grant. These changes in leadership appeared to have had ripple effects in the trajectory of the school, which may help explain why these schools shifted from the lower to the moderate or higher categories by the final year of SIG.

For example, one of these schools had a reportedly turbulent first year of SIG. Teachers noted that SIG had been forced upon them, and many of them felt betrayed by the district, which applied for the grant despite opposition. The district hired an unpopular principal, who left midway through the school year. Teachers described an assortment of unrelated improvement actions that were either ineffective or did not clearly tie into an overarching vision for school improvement. The assistant principal summed up the first year: "It felt like things were being done to people versus done with people." In the second year of SIG, there was a significant shift at the school. The district hired a new principal and replaced more than half of the teaching staff. The new principal viewed her role as the "keeper of the vision to keep it on track to make sure we have aligned coherence." She brought about changes that reportedly resulted in a culture shift. As one example, she expanded the leadership structure of the school to include more teachers and to reflect a more distributed style of leadership. With these changes, morale at the school improved by the final year of the grant. Teachers also reported a higher level of clear and shared goals than in Year 1, as well as higher levels of data use. Although the assistant principal mentioned that there is still work to do, this school appeared able to mobilize some aspects of capacity building.

Organizational Capacity and Efforts to Build Human Capital in Years 1 and 2

SIG emphasizes building capacity through changes related to governance, structure, practice, and in particular human capital "to effect rapid and substantial improvement of persistently low-achieving

schools" (Perlman & Redding, 2011, p. 5). For example, the turnaround model mandates that the school replace the principal and at least 50 percent of the staff in an effort to remove less-qualified teachers and leaders. Given the importance SIG places on building human capital, we also explored the relationship between schools' organizational capacity and efforts to build human capital. Our data suggest that schools' reported efforts to build human capital in the first two years of SIG (as reported in Chapter 7) is related to the likelihood that schools' organizational capacity improved over the three years of SIG (see Exhibit 8.5).

Exhibit 8.5.
Level of Effort to Build Human Capital in Years 1 and 2 Relative to Change in Organizational Capacity from Year 1 to Year 3

	Capacity Decreased	Capacity Remained Stable	Capacity Increased	Total
Fewer efforts to build human capital (2.5–5.5)	*1 school* Sawbuck Elementary	*3 schools* Coral High Proctor Point High Paul Bunyan High	*1 school* Elmsville High	**5 schools**
Many efforts to build human capital (6.5–8.5)		*4 schools* McAlliston High Meribel High Baltimore Bridge Elementary Sterling Slope Elementary	*3 schools* Blizzard Bay Elementary Island Bay Elementary Gale Secondary	**7 schools**
Total	**1 school**	**7 schools**	**4 schools**	**12 schools**

Source: SST respondent interviews and focus groups, spring 2011 and spring 2013; SST teacher survey, spring 2011 and spring 2013.

Notes: Includes 12 core subsample schools. All school names are pseudonyms.

See Exhibit 7.1 for measures of efforts to build human capital and Exhibit 8.3 for measures of organizational capacity. Each school's organizational capacity was classified as lower, moderate, or higher in Year 1 and in Year 3 of SIG. A school's capacity decreased if their classification decreased from Year 1 to Year 3 (e.g., moderate in Year 1, lower in Year 3), remained stable if their classification was the same in Year 1 and Year 3, and increased if their classification increased from Year 1 to Year 3 (e.g., lower in Year 1, higher in Year 3). This analysis may be limited due to potential ceiling effects, as schools identified as having higher organizational capacity in Year 1 could not increase their capacity rating any further, and thus were placed in the stable capacity category.

Schools that appeared to make more effort to build human capital in Years 1 and 2 of SIG were more likely to improve their capacity (or sustain their already higher capacity) than schools that appeared to make less effort to build human capital. Three of the seven core subsample schools with a human capital building rating of 6.5 or higher improved their organizational capacity rating from Year 1 to Year 3. One of these schools had lower organizational capacity in Year 1 and higher organizational capacity in Year 3. This school received a new principal in the second year of SIG and subsequently invested in building human capital at the school. Respondents reported a focus on building infrastructures for data use, collaboration, and distributed leadership. When deciding between spending funds on human resources versus other types of resources for the school (such as technology), the principal stated, "I'm going to opt for the human resources piece because we believe that is, without a doubt, the basis for our success." The remaining four schools with a human capital building rating of 6.5 or higher already had higher organizational capacity ratings in Year 1 and were able to maintain those higher ratings in Year 3.

Among the five core subsample schools that reported fewer efforts to build human capital in Years 1 and 2 of SIG (human capital building rating of 2.2 to 5.5), one increased organizational capacity in Year 3

and three remained stable, while one decreased organizational capacity. Respondents from one of these schools in Year 1 described the administration's approach to SIG as "business-as-usual." That approach apparently continued: in Years 2 and 3, respondents did not report engaging in any activities that were judged to constitute "visible breaks" from prior practice, despite a new principal in Year 3. The school also reportedly made few efforts to build infrastructure for data use, teacher collaboration, or distributed leadership. It is thus not too surprising that this school showed no improvement in its organizational capacity rating from Year 1 to Year 3.

School Stories of Change

Although the aggregate ratings presented in this chapter provide a tool for comparing schools and identifying potential relationships between measures, the individual context of each school should also be considered to better understand perceptions of improvement and changes in organizational capacity. This section includes the stories of two contrasting schools that highlight some of the nuances and complexities of how these changes may occur. Both are stories of restart schools that had a "fresh start" in Year 1 of SIG and sought to build capacity in similar ways. However, one of these schools (Sawbuck Elementary, Box 8.3) ended up with a lower level of organizational capacity in Year 3, while the other (Baltimore Bridge Elementary, Box 8.4) ended up with a higher level.

Box 8.3. Sawbuck Elementary: Obstacles to Growing Organizational Capacity

Sawbuck Elementary's efforts to build capacity to improve student learning were reportedly stymied by leadership instability, an inexperienced teaching staff and external support organization, and a lack of a vision and change strategy. SIG coincided with a broader district reform initiative in which the district assigned a council of parents and community members to plan aspects of the change process at Sawbuck Elementary. In the first two years of SIG, as part of implementing the restart model, the school's leaders hired an entirely new teaching and administrative staff, integrated the help of an external support organization, and moved into a renovated facility. The school also reportedly put forth various efforts to build an infrastructure for collaboration and data use, and implemented a variety of professional learning opportunities.

Despite the new resources and efforts to build human capital and organizational capacity, the school faced a variety of challenges. First, the new teaching staff included mostly first-year teachers who reportedly struggled with the challenges of a persistently low-performing school. Second, the members of the administrative staff—including the principal and assistant principals—were also new to their roles. High turnover among teachers and assistant principals was reported after the first year of SIG.

In the second year, morale improved slightly as staff adjusted to their roles. However, the principal was perceived as disorganized and unfocused, and a lack of growth in student achievement prompted the CMO to terminate the principal. The departure of the principal was described as jarring and abrupt, casting a shadow over the school in its final year of SIG. In addition, one of the assistant principal positions was terminated, and another assistant principal was let go.

By Year 3, respondents could not identify areas where the school had improved. Most teachers noted that the moderate progress they had made in the prior year had not continued into the final year of SIG, and in fact, many perceived the school to have regressed. The lack of progress was attributed by and large to a change in the leadership. Respondents felt that these changes were for the worse, as the new principal was not perceived as a strong leader or communicator.

Box 8.4. Baltimore Bridge Elementary: A Human Capital Focus

The implementation of SIG at Baltimore Bridge Elementary coincided with a larger district initiative in which the district assigned the lowest-performing schools to an intervention. As part of the restart model, all school staff and leaders had been replaced, a new curriculum and new data-driven decision strategies were immediately implemented, and the school partnered with a CMO to help with the change process.

In its first year of implementation, the CMO immediately set forth a "human capital focus," which included intensive coaching cycles, two hours of grade group meetings, professional learning activities once a week, formal observations of teachers multiple times throughout the year, and performance-based compensation. The school also implemented a longer school day and year, and the curricular approach included a focus on reading.

In subsequent years of SIG, the school continued to focus on the strategies that had been set forth in the first year of implementation. The school maintained its focus on improving reading and expanded some of its strategies to encompass more students and classrooms—in addition, the school offered targeted teacher coaching on reading strategies. The principal, who was described as visionary and enthusiastic, made a concerted effort to transfer some of the leadership responsibility to the leadership team.

In the final year of implementation, the school was reportedly a "teacher- and student-driven school." Teachers led professional learning activities and were encouraged to participate in planning meetings. Although there was some evidence of staff burnout by the end of SIG, the school appeared to continue on its trajectory toward change, and leadership was satisfied with the low rates of teacher turnover. The positive changes observed at Baltimore Bridge over the course of SIG were unanimously reported by school staff. In this sense, the story of Baltimore Bridge is one of a visionary leader who was aided by an external organization that placed a strong and consistent emphasis on instructional change and supports for building human capital.

The two stories of Sawbuck Elementary and Baltimore Bridge Elementary reinforce our earlier points about the relevance of the interconnected aspects of capacity and the importance of strong leadership. At Sawbuck Elementary, the efforts to build human capital through data use and teacher collaboration were apparently thwarted by a variety of challenges that kept the school from leveraging its potential and expanding on the infrastructure it had created. Meanwhile, Baltimore Bridge Elementary was able to establish a variety of mechanisms for school change that appeared to support one another. The principal and CMO had a vision of how they would enact change, and they implemented improvement strategies accordingly by focusing on building human capital and instructional change related to reading.

Chapter Summary

This chapter presented analyses related to perceived improvement over the course of SIG and changes in school-level capacity from Year 1 to Year 3 of the grant period. While restricted to the small set of 12 core subsample schools, the findings support some tentative conclusions about the improvement process under SIG. First, most teachers in most schools perceived improvement overall during the three years of SIG, although the quality of leadership appeared to be related to the amount of perceived improvement. Although these perceptions do not necessarily imply actual improvements in student achievement, the overall positive trend may be a promising indicator for the school improvement process after SIG.

Second, there is some evidence that many of our core subsample schools were able to improve their levels of organizational capacity over time, or at least maintain a higher level of existing capacity. We also found that schools that improved their capacity or maintained a higher capacity were those that appeared to make a greater effort to build human capital in Years 1 and 2 of SIG. Again, the indications of improvement in organizational capacity do not necessarily imply actual improvements in student achievement, but they are perhaps an encouraging first step.

SIG is meant to be a one-time infusion of resources in low-performing schools, and in this chapter we focused on perceived changes over the three-year grant period. However, SIG is also meant to lay the foundation for improvement that can be sustained well beyond the course of the grant. Whether or not our 12 core subsample schools have been able to successfully build this foundation for sustainability after SIG is a question to which we now turn in the following chapter.

Chapter 9: Sustainability of the Improvement Process

SIG intended to provide a one-time infusion of resources to stimulate dramatic change that could be sustained beyond the three-year grant period. While discussions of sustainability often focus on the financial aspects of continuing specific interventions, sustaining the school turnaround process is more complex than, for example, finding money to maintain an instructional practice, extended day, or professional learning opportunities. As Jerald (2005) argued, sustainability entails maintaining, extending, and adapting improvement efforts in an unremitting reflective process. Fullan (2003) similarly posited, "Sustainability involves transforming the system in a way that the conditions and capacity for continuous improvement become built in" (p. 91). This notion of processes being *built in* or *internalized* is often cited as a definitional component of sustainability (Coburn, 2003). Thus, distributing leadership and building human capital or school organizational capacity more generally—topics we examined in earlier chapters—appear to be central components of sustainability. Some researchers have indeed reported a relationship between capacity and sustainability (Florian, 2000; Taylor, 2006). However, there remain risks for even the schools that developed higher capacity by Year 3 of SIG. If a critical mass of key staff leave, they may take with them vital knowledge accumulated over time. If time for collaboration is cut, staff may not continue professional dialogue that fosters learning. These and other risks can compromise a school's overall prospects for sustainability.

In this chapter, we explore how respondents in our 12 core subsample schools felt about their school's prospects for sustainability. First, we examine the relationship between organizational capacity and respondents' sustainability predictions. Next, we describe the challenges for sustainability that respondents believed their schools have confronted or will confront with the conclusion of SIG. Because data collection activities concluded with the three-year grant, we cannot document post-SIG activities. However, the study team did ask respondents about plans for replacing SIG funds, whether they anticipated continuing improvement actions, and concerns about threats to sustainability.

Box 9.1. Key Chapter 9 Findings

- Core subsample schools that had higher levels of organizational capacity were also the schools with higher scores on the teacher survey scale measuring perceived sustainability.
- The most frequently reported risk factors for sustainability were related to human capital. For example, respondents in 9 of the 12 schools expressed concern about losing staff in the following school year, and respondents in 2 of the schools explicitly linked sustainability concerns to an impending change in school leadership.
- Of the 12 schools we followed for all three years of SIG, 2 appeared to have strong prospects for sustainability, 6 appeared to have mixed prospects, and the remaining 4 appeared to have weak prospects, according to data from the teacher survey and site visits.
- Schools' prospects for sustainability appear to be unrelated to several variables that might be hypothesized to predict sustainability, such as the size of the school's grant relative to baseline spending, enrollment, school level, or type of SIG intervention model.
- Respondents in 2 of the 12 core subsample schools provided evidence of ownership of the improvement process by Year 3 of SIG.

Organizational Capacity and Perceived Sustainability

In the previous chapter, we identified a set of indicators that collectively comprise our measure of organizational capacity (see Exhibit 8.3). These indicators include principal leadership, coherence, clear and shared goals, teacher collaboration, teacher-teacher trust, safe and orderly climate, use of data, and locus of responsibility. We posit that a school's organizational capacity constitutes a set of reserves that may facilitate the transition to the post-SIG era. As schools build their organizational capacity, they put in place the supports and strengths necessary to continue the improvements they have made, even as urgency fades and grants conclude. In predicting a school's prospects for sustaining improvements, we considered the overall level of organizational capacity, a measure that was examined in the previous chapter.

In addition, we more directly measured perceived sustainability. In the spring 2013 teacher survey, respondents were given a series of Likert-scale items that asked them about their level of agreement with statements regarding the school's future (strongly disagree = 1, strongly agree = 4). Together, the following items scaled with a reliability of 0.87:[47]

a. School leaders (e.g., principal, department chairs) are committed to continuing the efforts to change this school for the better.
b. Teachers in this school are committed to continuing the efforts to change this school for the better.
c. Our school has the systems in place to sustain the changes we've made.
d. School leaders (e.g., principal, department chairs) will have the resources (e.g., capacity, support) to continue the efforts to change this school for the better.
e. Teachers in this school will have the resources (e.g., capacity, support) to continue the efforts to change this school for the better.

We determined schools' perceived sustainability index by calculating the average score across all five survey items for the school. Across the 12 core subsample schools, the perceived sustainability index ranged from 2.58 to 3.53. To highlight some of the context surrounding these scores, Box 9.2 and Box 9.3 present the stories of two contrasting schools—one that scored comparatively high on the perceived sustainability index (Sterling Slope Elementary) and one that scored comparatively low on the index (Blizzard Bay Elementary).

[47] The surveys were designed to measure constructs pertaining to the school as a whole related to contextual influences, selected improvement actions, and dimensions of implementation (see Exhibit 1.2). We assessed the quality of the teacher survey scales by conducting a confirmatory factor analysis on the items separately for each scale and by computing the scale reliability (Cronbach's alpha). Exhibit C-1 in Appendix C shows the reliability and contributing items for each scale. Scale scores were computed on the basis of the mean of the individual items composing each scale.

Box 9.2. Sterling Slope Elementary: Commitment to Sustain Progress

Sterling Slope Elementary's turnaround efforts began the year prior to SIG (2009–10) when the district assigned the school a new principal with a track record of improving academic performance. Described as a visionary leader, the new principal initiated a multi-faceted reform process that continued through the three years of SIG. The principal replaced over 50 percent of the school staff [in both the year prior to SIG and in Year 1 of SIG (2010–11)] in an effort to replace weaker teachers with stronger ones, overhauled numerous school processes (from curriculum to dismissal procedures), and instituted a variety of improvement strategies, many of which were developed and supported by the local school district. For example, the principal strengthened data use, established weekly collaborative planning time led by instructional coaches, and created opportunities for teachers to observe one another's instruction.

Although the principal moved to another school in Year 2 of SIG (2011–12), the district promoted a highly-regarded assistant principal from the school to assume the principal position in Year 2, in what respondents universally characterized as "a seamless transition." The school also retained its "rock star" instructional coaches, who were familiar with the school's vision and could build on the practices they had established the previous year. In addition, district officials continued to conduct quarterly visits to the school to monitor progress and assess the needs of the school. With school leaders committed to continuing improvement efforts in place, school leaders and teachers reported deepening their implementation of improvement strategies in Year 2 with a staff that was "strong," "united," and fully on board with the school's vision for improvement. As one teacher commented,

> *[At Sterling Slope] there's continuity and consistency…. Often in education reform, something is tested one year and if it didn't quite work, chuck it completely and try something new. What I've seen here is the opposite, [we're] taking lessons from failures…. We examine the approaches that worked [so we can] build on those strengths.*

However, Sterling Slope still faced some challenges. Staff instability was a recurrent theme at Sterling Slope, due to the school's reliance on Teach for America (TFA) teachers. To address the waves of new, inexperienced teachers, district and school administrators strove to ensure a strong and stable leadership team. The school's principal and instructional coaches, who were trained to work explicitly with new teachers, remained consistent for the remainder of SIG and were expected to continue their roles even after the end of SIG. Likewise, district officials indicated that the district was committed to maintaining the support infrastructure it built during SIG (e.g., system of instructional coaches, monitoring visits) using other funds. As one of these instructional coaches concluded,

> *There's been enough key players in the school who have seen the changes and the metamorphosis…. I think they have the knowledge and wherewithal to say this is how it's done [at Sterling Slope]. So I think there are enough people here, in the various grade levels to be able to move forward.*

Box 9.3. Blizzard Bay Elementary: An Uncertain Future

In the years leading up to SIG, Blizzard Bay Elementary had seen numerous reform efforts come and go, and teachers—most of whom had worked in the school for years (and, in some cases, decades)—were reportedly feeling burned out by the frequent waves of reform efforts. With this in mind, the district's goal in writing its SIG application was to propose non-intrusive activities that minimized the burden placed on teachers, such as afterschool supports and additional counseling for students. However, SIG coincided with the district's adoption of a whole school reform model, which required widespread changes to school and classroom practice, including more student-centered approaches to instruction, increased data use, and new teacher leadership roles.

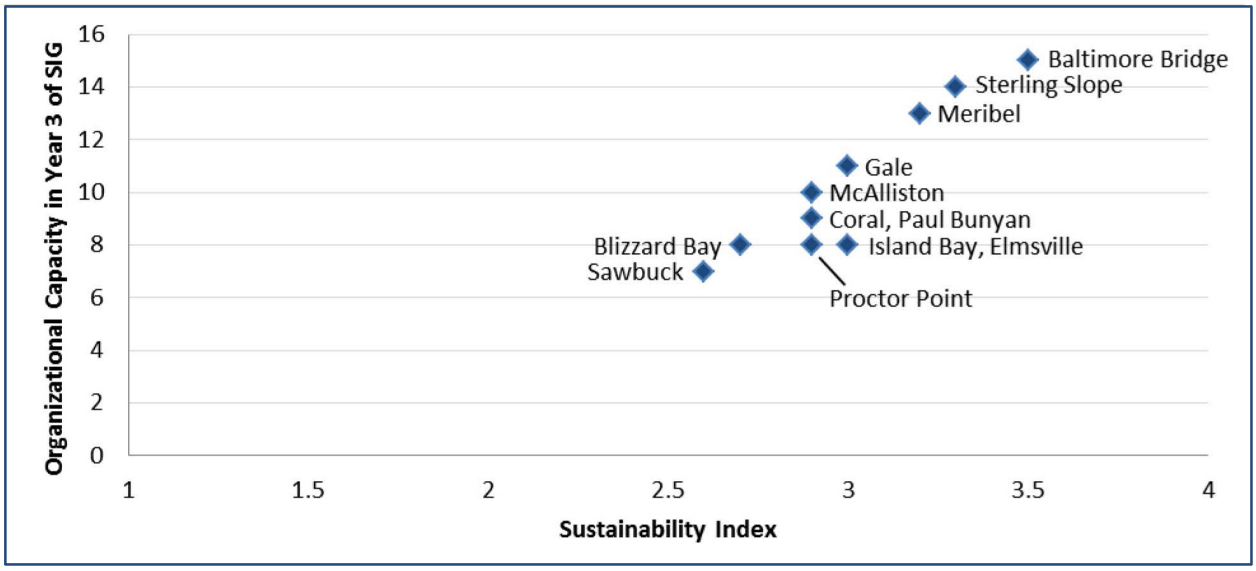
Per SIG requirements, the district replaced Blizzard Bay's long-standing principal with a new leader, who was viewed as "charismatic" and "energetic" and had experience turning around low-performing urban schools. In Year 1 of SIG (2010–11), the principal established new governance structures, organized teacher professional development opportunities, and met regularly with teachers to prepare them to implement the whole school reform model in Year 2 (2011–12). At the beginning of Year 2, teachers reported feeling overwhelmed by the reform model's requirements, but by the spring, they described feeling more accustomed to the new practices. At the end of Year 2, district and school leaders noted several areas of school progress—including a stronger professional culture among teachers, higher expectations for students, improved instructional practices, and improved student performance—but they also acknowledged that more progress was needed.

Year 3 of SIG (2012–13) brought significant changes. Due to district re-zoning, the school received an influx of new students that increased its total enrollment by nearly one third, and class sizes soared. In addition, the district assigned the principal additional responsibilities supporting other schools in the district, which reduced the time and attention the principal could devote to Blizzard Bay. Teachers continued to focus on implementing the whole school reform model in Year 3, but their efforts were reportedly overshadowed by an upsurge in student behavior problems. By the spring, teachers described a chaotic school environment with student discipline at an all-time low. Respondents attributed the behavior problems to various factors—overcrowding at the school, students' challenging home environments, students' boredom with the new reform model—and despite efforts to collect and analyze data on student behavior, teachers reported no successes or improvements in that area.

By the end of Year 3, respondents described an uncertain future for Blizzard Bay. District officials planned to continue implementation of the whole school reform model for at least the next few years. They did not, however, have a plan for addressing the school's overcrowding, and ongoing budget pressures threatened the school's access to sufficient resources to continue improvement efforts. Teachers reported feeling defeated in the face of student behavior problems, and there was a possibility the school would lose its principal to another school or a position in the district office.

Core subsample schools that had higher levels of organizational capacity by Year 3 of SIG (2012–13) were also the schools with higher scores on the teacher survey scale measuring perceived sustainability. Exhibit 9.1 plots for each school the organizational capacity measure in Year 3 of SIG (first presented in Chapter 8) against the sustainability index based on the teacher survey (described above). The plot shows that schools with higher organizational capacity also tended to have higher sustainability scores. This finding is consistent with the hypothesis presented above that capacity is a central component of sustainability.

Exhibit 9.1.
Perceived Sustainability Index and Organizational Capacity, 2012–13



Sources: Sustainability index: SST teacher survey, spring 2013. Organizational capacity index: principal, instructional coach, and teacher interviews; teacher, leadership team, and community focus groups; SST teacher survey, spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

Risk Factors

Having a high level of organizational capacity when SIG ends may be a necessary condition for sustainability but perhaps not a sufficient one. For example, if leadership instability ensues, teachers depart, staff positions are cut, professional learning is discontinued, or funding is cut, then institutionalized knowledge or practices may quickly dissipate (Berends et al., 2001; Bodilly, 1998; Taylor, 2006).

Anticipated Turnover in School Staff

Respondents in 9 of the 12 core subsample schools expressed concern that losing staff would be a threat to sustainability (see Box 9.4). In five of these schools, respondents anticipated losing staff whose positions were funded through SIG, including instructional coaches, dropout prevention staff, and community or parent-community coordinators. As a teacher from one school explained, "I worry about positions disappearing after SIG because I don't know what we are going to do without those. Some of our ability to meet those needs or that vision has come through those additional positions." The principal of another school remarked:

> *Obviously, another challenge with SIG is that we won't retain all of our positions. So, like our math coach, our math acceleration teacher, our community schools coordinator, our ELD coach, we won't have some of those positions.… We just have to be strategic about how we use our human capital.*

Respondents in five of these schools also explained that they were likely to be able to retain some, but perhaps not all, of the staff who had been newly hired through SIG. The principal at one school clarified,

> *The central office—even though it's not at the same [funding] level as [under] SIG—they are*

centrally funding positions, so they have identified schools for intensive support, strategic support.… The superintendent is keeping his word, and they are providing us with resources.

Box 9.4. Risk Factors for Sustainability in Core Subsample Schools

This analysis focuses on four specific perceived challenges to sustaining and continuing school improvement, including (1) anticipated turnover or loss of staff; (2) change in school leadership; (3) lack of district support, particularly with regard to retaining principals and teachers; and (4) loss of specific interventions (such as professional learning or extended day programs). Identification criteria for perceived risk factors are based on Year 3 interview and focus group data (see Exhibit B.29 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: district administrators, principals, teachers, instructional coaches, external support providers, and school improvement team members.

Identified as a perceived challenge for sustainability

- Respondents from at least three respondent groups described this explanation as a sustainability challenge.

In five schools, respondents were concerned about general staff turnover associated with schools in challenging contexts. Among these schools was a high school, at which a quarter of the teaching staff turned over each year, according to respondents. Respondents at a second school reported that while its faculty had stabilized during SIG, concerns lingered that teachers would not be willing to make the long drive to the school once they lost the extended day program and the associated pay (about 15 percent additional pay). As a teacher from a third school explained:

We have a lot of teachers who—they're just tired. Working in schools like this is exhausting.… The things that you see here, the hours, the work, the exhaustion, it's a lot. You're going to have administration changes next year. Our athletic director is moving on. We might have [an] activities director change, our head football coach just got promoted to an AP, and so that's another major change there. There is going to be a lot of changes.

Across these schools, respondents had similar assessments of the role of human capital in sustaining the school improvement process. As the principal of one school explained, "at the end of the day it's not about the programs and it's not about having anything else, but it's about having the right people in the right place."

Anticipated Change in Leadership

Many of the core subsample schools had a high rate of principal turnover over the course of SIG, with 5 of the 12 schools replacing their principals twice during the three-year grant period. At our site visits in spring 2013, we asked respondents whether they anticipated a new principal in fall 2013, and indeed, respondents in 4 of the 12 schools said that they did.

Interview and focus group respondents in two schools explicitly linked concern about the prospects for sustainability to the impending loss of the current principal (see Box 9.2). The principal of one of these schools exhibited the strongest leadership skills (see Exhibit 8.2), and it was in this school that respondents voiced the most concern about the principal's departure. As one teacher commented, "Everything changes when there's a new principal. Everything changes. It doesn't matter how much the principal put together before leaving." In two other schools where respondents reported anticipating a

new principal in fall 2013, the quality of the departing leadership was not as high, but respondents described the turnover as another instance of instability and uncertainty.

Perceived Lack of District Support

Respondents in 4 of the 12 core subsample schools described the district as a primary threat to sustainability, often in strong, bitter terms (see Box 9.2). Staff at one school reported a lack of support from the district, particularly with regard to human capital management. As the principal explained, "The key challenge is…the district office—whether it is staffing, whether it is having quality people in our human resources ranks to be in the applicant pool.... The people that were in the pool, I wouldn't have hired to watch my dead dog." A member of the school improvement team also noted:

> *We also have lost some people to other [district] schools. We've lost people that way. That kills the system.… It can be demoralizing at times to invest this amount of time into people and then to see that others in the district are able to just go in and [poach staff from us]. And people just leave. The system doesn't support the most needy schools.*

At another school, the lack of support was reported by nearly all respondents (including district staff) as one of the primary reasons for the school's history of low performance. At the conclusion of SIG, respondents expressed concern that the district could revert to their prior practices of sending the lowest-performing teachers to this school. Nearly every respondent, from parents to teachers to administrators, cited the district as the greatest challenge facing the school.

Loss of Specific Interventions

Respondents in 6 of the 12 core subsample schools pointed to specific interventions, resources, or programs that they would lose once SIG money was spent (see Box 9.4). Some of these specific items have implications for human capital. Specifically, respondents noted that they would not be able to continue professional learning opportunities at the current levels (three schools), extended day or afterschool programs would be cut (three schools), and technology purchases would be curtailed (two schools). The potential loss of the extended day at one school was particularly acute because it was perceived to be closely intertwined with other issues related to sustainability. If the extended day were cut, then teachers would lose the associated extra pay and would be less inclined to drive the long distance to the school. They would also lose a full class period, reducing the number of classes that this small high school could provide, including newer offerings such as Advanced Placement and music.

Overall Prospects for Sustainability

Thus far in this chapter we have presented a quantitative measure of sustainability using teacher survey responses, as well as a qualitative measure focused on risk factors for sustainability identified from site visit interviews and focus groups. We now combine these two measures to provide a broader summary of schools' projected prospects for sustaining improvements (see Box 9.5).

Respondents from 2 of the 12 core subsample schools perceived their schools to have strong sustainability prospects. Not only did these schools receive the highest ratings on the teacher survey scale, but other interviewees expressed confidence that these schools had the resources to sustain and build upon their improvements. For example, respondents at one of these schools noted that, from the start, the school planned to use SIG to purchase materials and train staff to build capacity. An administrator said that the school applied for SIG "intentionally saying what is our plan for sustainability

and what can't we afford to do in Year 1, or 2, or 3 without some funds raised to support that." Thus, at the end of Year 3, the school was prepared for the absence of SIG.

Box 9.5. Perceived Sustainability Prospects

This analysis focuses on respondents' perceptions of their school's prospects for being able to sustain and build upon improvements. School classifications on sustainability prospects are based on Year 3 interview and focus group data (see Exhibit B.30 for more detail on the analytic procedures). For this analysis, *respondents* refer to individuals from the following respondent groups: district administrators, principals, teachers, instructional coaches, external support providers, and school improvement team members.

Perceived as having strong sustainability prospects

- Qualitative data: No respondent mentioned any of the four risk factors to sustaining and continuing school improvement; and no respondent described the school's sustainability prospects in negative terms; AND
- Survey data: Sustainability index scale average was at least 0.5 standard deviations (0.26) above the Year 3 scale mean (3.01).

Perceived as having mixed sustainability prospects

- Qualitative data: Respondents from at least three respondent groups reported on at least one of the four risk factors to sustaining and continuing school improvement,[a] but respondents' descriptions of sustainability prospects were mostly positive; AND
- Survey data: Sustainability index scale average was within 0.5 standard deviations (0.26) of the scale mean (3.01).

Perceived as having weak or low sustainability prospects

- Qualitative data: Respondents from at least three respondent groups reported on at least one of the four risk factors to sustaining and continuing school improvement;[a] and respondents' described the school's sustainability prospects in mostly negative terms; AND
- Survey data: Sustainability index scale average was below the scale mean (3.01)

[a] While theoretically possible, there were no instances in our data where respondents from only one or two respondent groups reported on one or more of the four risk factors to sustaining and continuing school improvement.

At the other school, respondents were confident that "structures and systems" were sufficiently institutionalized that the practices they valued most would persist. As one school improvement team member explained:

> *There's been enough key players in the school who have seen the changes and the metamorphosis that I think if [the current leadership team] were to leave this building and someone else were to come in, I think they would have the knowledge and wherewithal to say, "This is not how it's done" and "We do not think this will be effective." So I think there's enough people here—pockets in the various grade levels—to be able to see that and be able to move forward.*

In addition, this school's leadership had also worked with the district to ensure funding for "intervention" staff who had been paid through SIG. The school improvement team had identified "nonnegotiables" that the school could continue without funding from SIG, including weekly grade-level planning time.

Respondents from 6 of the 12 schools perceived their schools to have mixed sustainability prospects. In these schools, multiple site visit respondents described at least one potential factor in the coming year that could jeopardize their school's progress. However, these risk factors were balanced by reported changes to school culture that could sustain continuous improvement. For example, one teacher commented, "I don't think that [losing SIG funds] will hurt us much because we've built such a good foundation, so many sustainable things already," and a second teacher explained that staff and students now embrace the notion that "this is what we do here. This is the culture. We're successful." Still, multiple respondents (principal, teachers, instructional coach, and district official) all raised concerns about the potential loss of staff who had been funded through SIG.

Another school had a challenging start to the SIG process, but by Year 2 it had put in place several efforts to build capacity, yielding one of the highest ratings for capacity-building efforts (see Chapter 8). At the conclusion of SIG, one teacher exclaimed, "The last two years have been amazing! …I've been exhausted, they've gotten me back to feeling like this is what it's supposed to be, and this is what this grant was supposed to do." The principal noted:

> *The other piece is the whole notion of capacity building. So hopefully—SIG wasn't a long-term fix, it's a short-term boost—and so hopefully we do have systems and structures in place that although the dollars are leaving, the knowledge and the know-how and the best practices and the research is there to continue the work around grade-level collaboration, around professional development.*

Respondents from 4 of the 12 schools perceived their schools to have weak sustainability prospects. For two of these schools, the survey sustainability measure was low relative to the other schools. In addition, respondents from multiple respondent groups at both schools expressed concerns about their school's leadership for the next school year and their leaders' ability to guide the school's continued improvement process. For example, at one of these two schools, the principal reported having responsibilities that took him outside the school, and expectations were that he was not going to return in the next school year. One teacher expressing uncertainty for the future said, "Even though I think he's done an okay job of building the vision, I just don't know that it'll stick if he goes." In the other school, respondents from multiple respondent groups, including the leadership team and teachers, expressed concern about the current school leadership. According to respondents, the school suffered from poor leadership during SIG and "a lot would fall into place with a solid leadership."

At the other two schools with reportedly weak sustainability prospects, respondents expressed concern about losing staff and described their prospects for sustainability in distinctly negative terms. As one principal stated bluntly, "I just feel that some of this is going to go down the gutter." The principal at the other school explained that the district office was a notable barrier to improvement:

> *The challenge has been to have us be a priority at the district level, and we truly are not…. The constant challenge is the district. It is. At the school, it's the mobility of my staff—having a fluid system of staff and having to continually rebuild. My AP [assistant principal] was pulled out last year to be a principal at another school.... There isn't a priority to turn us around. Our students and their families do not have a voice. And it hurts me to see that this district is taking advantage of them.*

The 12 core subsample schools' prospects for sustainability appear to be unrelated to several variables that might be hypothesized to predict sustainability, such as the relative size of SIG, SIG model, enrollment, or school level (see Exhibit 9.2). However, the two schools with stronger prospects of sustainability also were deemed to have a disruption from prior practice (see Le Floch et al., 2014). In addition, a school's predicted prospects for sustainability do generally appear to be related to the

percentage of teacher survey respondents who reported a positive change over the course of SIG. For example, Baltimore Bridge Elementary has both strong sustainability prospects and the highest percentage of teachers reporting improvement (97 percent).

Exhibit 9.2.
Core Subsample Schools' Sustainability Prospects and Other Variables

	Sustainability Prospects	Average Enrollment 2010–13	Estimated Year 1 SIG Per-Pupil Expenditures as a Percentage of Overall Per-Pupil Expenditures	Disruption From Prior Practice	Percentage of Teachers Reporting Positive Change
Sawbuck Elementary	Weak	350-550	20%	Yes	0%
Blizzard Bay Elementary	Weak	350-550	7%	No	10%
Proctor Point High	Weak	650-900	13%	No	31%
Coral High	Weak	1200+	6%	No	43%
Paul Bunyan High	Mixed	1200+	16%	No	49%
Elmsville High	Mixed	1200+	22%	No	53%
McAlliston High	Mixed	650-900	32%	No	57%
Island Bay Elementary	Mixed	350-550	120%	No	67%
Gale Secondary	Mixed	650-900	15%	No	76%
Meribel High	Mixed	350-550	49%	Yes	92%
Sterling Slope Elementary	Strong	350-550	6%	Yes	85%
Baltimore Bridge Elementary	Strong	650-900	7%	Yes	97%

Source: SST respondent interviews and focus groups, spring 2013; SST teacher survey, spring 2013.
Notes: Includes 12 core subsample schools. All school names are pseudonyms.

Ownership of Reform

Researchers have argued that school improvement actions are most likely to be sustained when they are internalized—that is, when they are no longer driven by an entity external to the school but are understood, embraced, and self-generative (McLaughlin & Mitra, 2001; Stokes et al., 1997). Coburn (2003) describes this shift in ownership through which both the authority for and knowledge of the improvement process transfers to school actors from an external source. Related to the notion of buy-in, ownership is a deeper concept, through which stakeholders have become personally invested in the improvement actions. Ownership of reform comes about when they are able to "sustain, spread and deepen reform principles" (Coburn, 2003, p. 7). Thus, we hypothesize that evidence of a shift in ownership would be a potentially strong predictor of sustainability after SIG ends. However, as the following school profiles demonstrate, ownership and engagement of the school staff in the reforms and the improvement process may not be enough to ensure sustainability.

Respondents at 2 of the 12 core subsample schools provided evidence of ownership of the school improvement process by Year 3 of SIG (see Box 9.6). In the remaining 10 schools, not enough data were collected to make an assessment of ownership. At one of these schools, implementing the restart

model, the school's charter leadership intentionally designed its governance plan to give teachers more responsibility over school decisions as the grant period progressed. The principal explained that the school had a three-year model of "my school, your school, our school." As he recounted:

> *Year 1 was about me being the boss here, from my perspective, setting [the] tone for everything, everyone. Year 2 was about me releasing that to my leadership team, making sure they were being the boss of their fiefdoms. Year 3 is about teachers being the boss. We had t-shirts made, and [we] talk about this all the time: my school, your school, our school.*

Box 9.6. Perceptions of Ownership of Reform Efforts

This analysis focuses on whether respondents perceived the reform efforts being implemented as within their control. Classifications on ownership are based on Year 2 and 3 interview and focus group data (see Exhibit B.31 for more detail on the analytic procedures).

Evidence of Ownership

- At least one administrator (district administrator, principal, assistant principal) and at least two nonadministrative staff (teacher, instructional coach, parent) described teachers, administrators, or other stakeholder groups as contributing ideas, adjusting improvement strategies, taking on new responsibilities, and/or articulating the rationale for change.

The CMO representative explained that in the second year, the principal focused with his leadership team on how to shift the school's emphasis from "this is [the principal's] school" to "this is 700-and-some-odd families' school, this is all the teachers' school, and everybody owns what happens here." The CMO representative further explained:

> *[Leadership] talked with the teachers, talked with staff, like how can we get to a place where we really own it. So they [the leadership] shifted the lens, whether it's staff meetings or it's community meetings for kids. And they're really pushing ownership and voice to teachers and staff, which has been really exciting…. So we're actually seeing a lot of site-level innovations happening because [the principal] is embracing taking feedback from teachers and saying, "If they have a great idea, I'm going to try it."*

In Year 3, this school piloted a kindergarten program originally proposed by teachers. In addition, teachers explained that they take part in monthly steering committees, where staff members discuss plans for the future and their ideas about it with teachers and administrators. These meetings are open to any staff member and focus on a variety of topics (e.g., math, reading, culture, incentives, trips, behavior management). "The leadership team is very open," a teacher explained, adding that "it's about teacher feedback and what we can do to make the school better."

At the other school, stakeholders were reportedly disengaged and apathetic prior to SIG. According to accounts from multiple respondents, the teachers, parents, and students believed that their school was not on par with "real" high schools, and they had reportedly become resigned to second-tier status. However, the principal who was new to the school in the second year of SIG took on the challenge of encouraging the school community—starting with the teachers—to offer solutions, to embrace reform, and to not settle for second best. He admitted this required a change in leadership style, trusting and empowering staff to enact their own ideas. As he related:

> *The type of leadership that it requires to run this school is very different than what I would have expected that I would have to bring in. You don't want to have your hands on every aspect of what happens on your campus. What you end up doing is being present in every aspect, but you*

> *also have to make a conscious decision to let the opinions be heard, and whether you have a slightly different opinion or not, you have to look at what's best for your stakeholders.… In order for this to really move forward, you kind of have to trust the process. That requires a little bit more patience.*

He described his interactions with teachers in the school: "I sort of feed them the idea, encourage them, feed them the idea, encourage them, and then once it became theirs, then we're ready to move forward." Likewise, he encouraged students to approach him with their own ideas for the school, whether for a new club, afterschool event, or other resources. And when students had suggestions, "I always put it back on them: 'Give me the people that are going to be involved, what your expectations are, and then I'll take it back to the district office.' …I love the fact that the kids now expect that we should have the same resources and activities as other schools."

By the end of Year 3, multiple respondents—including the principal, assistant principal, coaches, and teachers—explained how the entire school community was more engaged, confident, and reliant on each other. By way of some examples, one teacher noted, "I think one of the things that changes the way we are looking now is before we used to get outside experts to present to us, and now we're trying to be our own experts." And the assistant principal observed, "I think that's one of the things that I've seen in the teachers. I see them now taking ownership of that and doing the research and figuring things out. This year we're building a master schedule, and these teachers are on it." Finally, one teacher summed up the shift in ownership as follows:

> *A lot of the change is people driven. It's a slow change, but it comes way more solid when it's built in relationships. I'll give you the example of the [classroom] walkthroughs. It started as basically an administrative leadership team. It morphed through conversations through risk-taking to teachers saying, "We're comfortable with that." …It just keeps evolving, and it's a natural evolution. How will this best help us improve? I imagine it will continue morphing to whatever we need at that point.… Our next steps are to increase accountability. And we're at a point because of the relationships where we can ask accountability from each other without being offended.*

However, in spring 2013, respondents, including school leadership and teachers, also pointed to several factors that could threaten the school's ability to maintain progress and continue to improve. Thus, although this school provided evidence of a shift in ownership, the presence of these risk factors ultimately placed it in the *mixed sustainability prospects* category. A key risk factor was the expectation that the principal would not be returning in fall 2013. One teacher said that she could not speak to the school's prospects "because we don't know who our principal is going to be" and "everything changes when there's a new principal." Although the school had managed to negotiate with the district to retain some SIG-related activities, multiple respondents expressed concern that the district would neglect the school's needs—as had reportedly been the case in the years prior to SIG. Indeed, respondents (including the principal, external support provider, teachers, parents, and district administrators) described their school as an "orphan," in part because of its geographic distance from the district office. Because of this history, staff were fearful that it would be too easy to slip into the previous dynamic with the district office. As one teacher explained, "When you ask me what it's going to be like in five years…I think it could be back to where it was. Because if somebody doesn't get up there in the district and realize the history, then I think we might be doomed to repeat history." And the school's external support provider summed it up this way:

> *I have been really irked by the lack of district support from the get-go.… I just don't think there was enough effort put into this by the district office, and I'm still not really pleased with the kind of support we're getting.… I'm enjoying watching the school improve, [and] we have some data*

that is very good. We had the biggest gain of any high school in our district. We had one of the best high school exit exam improvement rates in the county. We are making progress. I just don't want it to fall flat on its face when all the [money] goes away.

Thus, although this school built capacity and made some notable improvements under SIG, these improvements may prove fragile given the potential change in leadership and reportedly precarious relationship with the district.

Chapter Summary

Although SIG constituted an important opportunity for schools, it was always envisioned to be a temporary infusion of funds that would hopefully build capacity that could then help sustain improvement after the grant period ended. As we saw in Part II of this report, our 25 core sample schools did report making efforts to build capacity related to human capital in the first two years of SIG. As reported in the prior chapter, among our 12 core subsample schools, those that made the most vigorous efforts to build human capital capacity also appeared to have the greatest positive changes in organizational capacity. And as reported in this chapter, core subsample schools that had higher organizational capacity in Year 3 of SIG also tended to have higher sustainability prospects based on teacher ratings. However, the sustainability of any improvements may prove fragile. Even schools that appeared to build capacity and experience a shift in ownership of reform also appear to be threatened with continuing staff turnover, change in leadership, loss of specific interventions, or an unsupportive district context. Looking across the 12 core subsample schools, the overall prospects for sustainability seem strong in 2 of them but mixed or weak in the other 10. Thus, although our data suggest that the schools in this subsample experienced some change during the course of SIG, lasting improvements may remain elusive.

Report Conclusions

In the decades since U.S. schools have been tracking student achievement with assessments that enable comparisons across schools and student subgroups, divergent performance levels have been apparent and troubling. Federal policy has sought to stimulate and sustain improvement among the lowest-performing schools, through successive reauthorizations of ESEA (i.e., the Improving America's Schools Act and No Child Left Behind), and through programs specifically focused on fostering improvement models—such as the Comprehensive School Reform Demonstration Program and the SIG program. SIG in particular was intended to stimulate dramatic change in low-performing schools through personnel changes, professional learning opportunities, extended learning opportunities, and use of data to inform instructional decisions—all facilitated through an unprecedented infusion of federal funds.

The Study of School Turnaround was designed to examine how a variety of SIG schools approached the improvement process over the three-year grant period, and how SIG funds and strategies contributed to this process. In doing so, we were able to document schools' experiences in the initial phases of SIG, perceptions of performance problems, sets of improvement actions being adopted and implemented to drive school change, efforts to build human capital, changes in overall organizational capacity, perceptions of school improvement, and anticipation of sustaining an improvement process. In addition, as we developed familiarity with school stakeholders over time, we became more cognizant of each school's context, history, challenges, and potential for longer-term success.

In previous chapters of this report, our findings were organized by topic, with a focus on building human capital, organizational capacity, and sustaining the improvement process. In this conclusion, we synthesize our overarching findings about school change.

Most of our case study schools appeared to make positive changes to their organizational capacity, and most respondents in these schools reported improvement over the course of SIG. We are not able to determine whether these apparent changes were because of SIG, nor are we able to verify that these apparent changes also led to changes in actual student achievement. However, we can say that most respondents in most of our schools perceived that their schools had made positive changes over the course of SIG, most often with regard to school climate. Respondents also described improved instruction, data use, and collaboration. In several schools, respondents described their improvements in strong language, for example by explaining that prior to SIG, "There was really nothing going on in classrooms. Kids were running in the hallways [and] using profanity. It just wasn't a school. Now we are a school. It's a school where you see learning. It's a school where there's a feeling of safety.... It went from a warehouse of children to a school." Thus, although we cannot conclude that the various SIG interventions and supports precipitated the positive changes described in these schools, most respondents concluded that their schools were better off at the end of SIG, at least in some respects.

Nevertheless, some schools did not appear to change much under SIG. For example, respondents in one school described SIG as a "business-as-usual" approach, and this school showed no demonstrable change in organizational capacity over the course of SIG.

The schools that had the largest reported changes in organizational capacity by Year 3 of SIG were those that started at the lowest capacity levels in Year 1. Moreover, these are also the schools that reported making numerous efforts to build human capital. As reflected in SIG requirements, and consistent with prior studies, a minimum threshold of capacity may be necessary to enable the process of school change. However, this finding suggests that it may be possible, with some concerted effort, for low-capacity schools to build organizational capacity. In addition, we found that the schools with higher

initial capacity were able to maintain or even improve their organizational capacity over the course of SIG, consistent with a hypothesis that capacity could beget capacity.

Leadership appears to matter. This is a recurrent finding in studies of school improvement, and our study was no exception. Among our sample, schools in which respondents described improvements were more likely to be led by principals that reportedly demonstrated elements of strategic leadership, including having a theory of action for making improvements in their school. Furthermore, schools in which higher percentages of teacher survey respondents reported improvement had the highest-rated principals with regard to transformational leadership (principals who can motivate and engage their staff) and instructional leadership (principals who are knowledgeable about instructional issues). As important as strong leaders appear to be, identifying, recruiting, and retaining the most skilled principals in chronically low-performing schools is a persistent challenge. Mandating principal replacement in SIG schools appears to have in many cases brought stronger leaders to schools that needed a change in leadership. At the same time, we observed a continued pattern of frequent leadership turnover in several of our case study schools—a pattern which reportedly undercut the school's progress. When school leaders depart—particularly strong, well-regarded ones that are credited with improvements—the sustainability of school improvement efforts may be threatened.

Districts may be a notable asset in the improvement process, but some districts do not appear to work in the interest of their struggling schools. Our case study sample included districts that reportedly established structures, data platforms, meeting times, and other supports in service of their SIG (and other low-performing) schools. In some of our case study schools nested within these districts, respondents described their district supports favorably, even stating that continued district support would enable them to sustain improvements after SIG. In contrast, some schools expressed concern about the lack of district support, and described district actions that could jeopardize their capacity-building efforts. These schools described district practices that displaced their strongest teachers and leaders. As much as districts can do to support the change process in low-performing schools, our study provides examples of how districts may inhibit improvement at the school level.

School change appears to be fragile. Of the 12 schools in our core subsample, only 2 appeared to be in a strong position to sustain an improvement process. Six others may have the capacity to weather the loss of SIG resources, but they also reportedly had some notable risk factors, and despite reported improvements over the three-year grant period, the newly-built capacity could prove fragile. Among the risk factors described by respondents, nearly all were associated with human capital, particularly the anticipated loss of teachers, principals, or other key staff. District policies, especially those related to the placement and retention of teachers appeared to underlie some of these risk factors. Schools that appeared to have stronger prospects for sustainability were also those in which teacher survey respondents reported that the school had changed in positive ways, and were more likely to have experienced a disruption from prior practice at the beginning of SIG.

Our study suggests several challenges for education stakeholders seeking to enact programs and policies designed to break the cycle of persistently low-performing schools:

- How can programs and policies anticipate and minimize unintended consequences? Policies that mandate teacher replacement, for example, may inject new energy into a school with a dysfunctional staff culture. But district policies and standard operating procedures can undermine the intent of this policy, resulting in the placement of less effective teachers in low-performing schools (colloquially described as the "lemon dance").
- How can programs and policies better take into account variation in school context and history? Low-performing schools are not all the same, yet policies that offer limited options make

implicit assumptions about the characteristics of schools, their contexts, and where they are in the improvement process. For example, although some schools in our sample appeared to need a dramatic jump-start for their improvement efforts, others had already begun reform efforts—some quite extensive—prior to receiving their grants. Schools like these appeared to need less of a "jolt"—such as one that accompanies the replacement of a principal—and more continuity to be able to consolidate and build on a solid foundation.

Such policy challenges could be better addressed with more nuanced knowledge about how different approaches to reform play out in different circumstances. Under what conditions do prescriptive policies foster change? Under what conditions is it more effective to build incrementally on a solid foundation? What types of district supports set the conditions for turning around low-performing schools, and what district policies seem to get in the way? And finally, do requirements like those in SIG help schools continue to build the capacity that they really need to improve and sustain improvements?

The school change process is complex and crafting policy that acknowledges this complexity while compelling change has challenged policymakers for decades. Low-performing schools are not blank slates, on which new interventions and individuals can be imposed and assumed to stimulate better outcomes for students. These new policies are inserted into a complex policy context, history, and set of assumptions about each school. Still, our study provides evidence that these chronically low-performing schools *can* change in some respects, at least in the short term, with a great many efforts to build human capital. To sustain these changes, however, it appears that an equally great effort may be needed to retain any hard-won improvements.

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Appendix A. Study of School Turnaround Codebook, 2010–13

Code Correspondence by Year of Data Collection

The following tables present the code names, definitions, and examples used to describe codes in the SST codebook. The last three columns of the tables illustrate changes to the codes across the study's three years of data collection. Check marks in those columns identify the data collection year(s) in which a particular code was used. For years in which the code was not used, the columns identify which, if any, codes were used that year that would have been applied to equivalent segments of data. If none of the codes from that year applied to equivalent segments of data, the column indicates that no equivalent code was used that year.

PARTICIPANT BACKGROUND (#): Codes in this category apply to segments of data related to the background of interview and focus group participants. Apply these codes to segments of data that outline individual participants' histories at the school or district.

Code	Definition	Examples	Year 1	Year 2	Year 3
#participant background	Information on the participant's background in education.	Prior jobs, prior districts, experience with similar schools/school turnaround, professional degrees	#long history at school #new to district #new to role	✓	✓
#new to school	The participant was new to the school as of the 2010–11 school year or later. This code is meant to be used to distinguish staff that joined the school post-SIG versus staff that were there pre-SIG. In Year 1, this code also included participants that started working at the school in the 2009–10 school year.	Teacher, principal, external provider	✓	✓	✓

SCHOOL CHANGE (SC_): Codes in this category apply to segments of data related to the school change process.

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Challenge	Challenges or "areas for improvement" that are identified by study participants as being new or on-going sources of difficulty. For Year 3, this code also includes descriptions formerly coded as "problem definition," or conditions identified by school stakeholders as preventing the school from moving forward with improvement efforts. Challenges may be specific to Year 3, or they may be consistent over time.	Reading or math instruction, teacher morale, serving specific student populations more effectively (ELL or special ED), parent/community involvement, lack of financial resources, ineffective teachers, poor leadership, violence or behavior issues	*Challenge *Problem definition	SC_Problem Definition	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Coherence	Data that describe the degree to which the policies of a school reflect consistent goals; the strategies employed are clearly designed to foster achievement of these goals; and the barriers and detractors from the goals and strategies are systematically removed. This code can describe evidence of coherence as well as a lack thereof. It can also be used to capture system coherence between the district and the SIG school under study.	District-wide and school-wide implementation (across grades, content areas); if reform strategies address the school challenges; the need to focus because there are too many reform strategies; alignment between assessments and teaching standards; alignment among levels of organization (such as school, district, and state); alignment between reform strategies and goals; districts taking lessons learned and practices from schools receiving SIG and applying them to other schools in the district; consistency of reform strategy over time	%Coherence	SC_Alignment of Practices	✓
SC_Culture_climate	Data that refer to changes in the culture and climate (i.e., feeling) at the school site. Covers the entire spectrum of change from "no change" to "drastic change." Can be the perspective of the study participant or based on the coder's analysis of the text. Not to be confused with buy-in or morale. *Will often be double-coded with codes in the School Climate (^) section.*	Climate is happier; teacher and student body feeling more settled; school feels like it has more energy; climate is better, improved culture of collaboration, student behavior	No equivalent code	SC_Perceived Change	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_District Level	Despite being included in the "school change" category, this code is meant to capture data on district-level changes, either in Year 3 of SIG or over the course of the three years of the grant. If district staff are describing changes in support to SIG schools, make sure to double-code with SS_District. Includes the rationale for district-level changes being discussed.	District restructuring, changes in district leadership, changes in district goals and priorities, changes in district strategies	No equivalent code	SC_Perceived Change	✓
SC_Goals	Data that address district or school goals either past, present, or future. The extent to which various school stakeholders are aware of school or district-wide goals. Descriptions of how goals have been implemented/operationalized either in Year 3 or over time. The rationale about which goals to adopt, amend, or abandon. This code will also be used to capture changes in school or district goals over the course of SIG (Year 1 to Year 3). This code can also be used to capture data on future goals that will post-date SIG. Includes rationale for changes in goals.	Improving test scores, lowering dropout rates, higher attendance rates, more teacher collaboration and collegiality, a more defined discipline process; changing focus from one goal to another and rationale for this choice; descriptions of future goals for the school once SIG is over, like continuing to improve graduation rates or test scores	*Priorities	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Monitoring Change	Data that address whether and how the school, district, or state is monitoring the turnaround process in SIG schools. Different than the SIG_Processes code because this is monitoring school change more broadly and not specifically evidence of SIG compliance and monitoring activities. Includes rationale for specific monitoring processes or practices.	Includes analysis of benchmarks, school and classroom walk throughs, and leadership meetings held to assess progress toward goals	No equivalent code	✓	✓
SC_Other	Any data (other than climate/culture, student outcomes, perceived strategies) that reference perceived change at the school. Covers the entire spectrum of change from "no change" to "drastic change." Can be the perspective of the study participant or based on the coder's analysis of the text.	More focused school goals, no change in support from principal or district leaders	No equivalent code	SC_Perceived Change	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Perceptions on change process	Data that capture district and school-level reflections on aspects of school change either in Year 3 of SIG or over time. Reflections could address pace of change, progress towards school or district goals, challenges associated with school change or the implementation of change strategies, or "lessons learned" about turning around low-performing schools. Captures data on the change process in SIG schools that is more holistic and not broken down into specific components of change.	Reflections on setting school goals and establishing a vision; building teacher support; working with your school community and/or teacher's union; implementing new curricula, instructional strategies, or technology use, etc.; role of strong leaders setting realistic expectations for change	No equivalent code	SC_Perceived Change	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Strategies	Data that refer to changes in school strategies at the school site. Does not need to be related to SIG. Could be related to implementation of activities, the addition or subtraction of programs and staff. Refers to deepening of practice—descriptions of activities or programs that the school, teacher, district began working on in prior years and are continuing to work on this year. Covers the entire spectrum of change from "no change" to "drastic change." Can be the perspective of the study participant or based on the coder's analysis of the text. Includes the rationale for changes in strategies. *Will often be double-coded with codes in the Domains of Activity ($) section, SS_External Provider, SS_Instructional Coach.*	More teacher collaboration, adding or subtracting school positions or a parent or community liaison, adding an afterschool program, change in curriculum, added coach support, improved teaching practices, teacher replacement, leadership changes	No equivalent code	SC_Perceived Change	✓
SC_Student_outcomes	Data that refer to changes in student outcomes. Can be at the school and district levels. Covers the entire spectrum of change from "no change" to "drastic change." Can be the perspective of the study participant or based on the coder's analysis of the text. Includes the rationale for changes to student outcomes. *Will sometimes be double-coded with ^Attendance.*	Changes in school status (such as going from an "F" school to an "A" school); making AYP; improvements on reading and math assessments; improved attendance and graduation rates	No equivalent code	SC_Perceived Change	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SC_Vision	Discussion of long-range vision for the school. What principals, teachers, parents, students, or district personnel would like to see the school become over time. Includes the rationale for school vision.	All students proficient, life-long learners, college-goers, school as community resource, etc.	C_mission	✓	✓

SIG PROCESSES (SIG): Codes in this category apply to segments of data that describe how SIG schools are navigating the SIG process. These codes can describe aspects of SIG at any level of the system (state, district, school) and should be paired with the appropriate multipurpose code to separate district-level from school-level data.

Code	Definition	Examples	Year 1	Year 2	Year 3
SIG_Processes	Information on processes related to the administration of SIG, including the application and grant revisions process, model selection, grant restrictions, distribution of funds, how SIG activities are implemented, SIG oversight, and support for SIG implementation. This includes school- and district-level data.	When schools received Year 3 funding, whether they needed to carry-over Year 2 funding, how their grant activities are monitored by the district (if at all), whether schools can apply for funding extensions post-grant	SIG_Application process SIG_Distribution of funds SIG_Funding restrictions SIG_Grant revisions SIG_Model selection SIG_Oversight SIG_Support SIG_Implementation SIG_Planning SIG_Misc	✓	✓
SIG_Funded Activities	Data that identify specific activities as being SIG-funded. Can be new activities for Year 3 or also discussions about SIG-funded activities from Year 1 or Year 2. Will probably be used in conjunction with other codes from the "Domains" category. Data can be coded SIG-funded if the coder knows it is SIG-funded even though the respondent does not explicitly say so.	PD, curriculum, staff positions (coaches, counselors), technology	*SIG-funded	✓	✓
SIG_Perceptions	Data that capture stakeholder perceptions about the SIG grant. These perceptions may be positive or negative; they may be process oriented, implementation oriented, or outcomes oriented. Can also be used if a study participant is not aware of SIG.	How the community thinks of the usefulness of the grant, how students feel the grant has changed the school, if teachers, parents, or students are aware of the grant	✓	✓	✓

DOMAINS OF ACTIVITY ($): Codes in this category apply to segments of data that describe specific strategies, tactics, or activities that schools are continuing to use or have begun using during the 2010–11 school year. These strategies can be funded through SIG or through other funding streams. The codes are aligned with the study's conceptual framework. The codes are intended to be broad, so they should include all data that touch on the topics identified by the code. Also, the multipurpose codes (especially change strategy) will be used in conjunction with these domain codes to identify specific stakeholder groups or system-level actors involved with these activities.

Code	Definition	Examples	Year 1	Year 2	Year 3
$Curriculum_Instruction	Data about curriculum and/or instructional practices. Includes existing or new curriculum, as well as modifications/enhancement of existing curriculum. Includes aligning new or existing curriculum to district, state, or national learning standards. Also includes discussions of schoolwide efforts to improve instructional practices. Includes issues related to lesson planning, how students are grouped for instruction, and how students are placed into courses.	New or current math, ELA, or ELL curriculum; new standards; guided reading strategies	$Curriculum $Instruction	✓	✓
$Common Core	Data related to planning for and implementing the Common Core State Standards. Could be related to program coherence, adaptation of existing instructional or curricular strategies, assessments, or professional learning. Use in conjunction with other domain codes when necessary.	Implementation, planning, program coherence, professional learning, curricular strategies, instruction	No equivalent code	No equivalent code	✓
$Data Type	Data that reference type of data being collected or analyzed.	State assessments, district assessments, school assessments, student work	✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
$Data Use	Data that reference how data are being used by administrators, staff, and external stakeholders. Communication and interpretation of data, level of data literacy; frequency of data use to drive decisions and modify instruction.	Data used to evaluate student performance, data to differentiate instruction, timing of data collection, process for sharing data with teachers	✓	✓	✓
$Evaluation	Data that reference activities related to school or district evaluation systems. Includes new and existing evaluation systems, as well as changes to existing systems.	New review practices for principals, teachers, schools; different people involved in review, different measures of success or failure	$Evaluation Systems	✓	✓
$Incentives	Data that reference programs that create incentives for achieving desired outcomes. Can include existing incentive programs. Can also include other strategies to recruit and/or retain staff such as a "bonus" for hard to staff schools. Double-code with multipurpose codes to specify whether incentives are aimed at teachers, students, or administrators, and whether they are part of SIG or not.	Monetary bonuses for teachers or principals linked to student test scores; incentives for teaching at hard to staff schools; rewards for students for good behavior, attendance, etc.	✓	✓	✓
$Professional Learning	Data that reference any type of professional learning activities offered by the state, district, or school. May also be associated with building capacity. In such cases double-code with the capacity multipurpose code. Includes frequency of professional learning, who provides professional learning, who attends professional learning, perceived usefulness of professional learning, support for implementation of professional learning, and content of professional learning.	Professional learning series or one-time events, off-site training or on-site training, workshops, structured classroom observations, conferences	✓	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
$Staffing	Data that reference staffing decisions or conditions. Can be at any level—state, district, school. Includes changes in administrators, teaching staff, classified staff, teaching assistants, substitutes, instructional coaches, etc. Can include addition of new staff and/or changing roles and responsibilities. Also includes where staff were hired from if they were added to the teaching staff (e.g., from district layoff list or outside of district). Double-code with multipurpose codes to add detail.	Replacing existing teachers with different ones (this could have occurred because of SIG model, or it can be something that is planned); hiring custodians, cafeteria staff, office staff; adding coaching positions; changes/additions to principals or other administrative staff	✓	✓	✓
$Technology	Data that reference technology use. Can describe technology that has been purchased or distributed as part of a school's improvement efforts, perspectives on technology use within school or district, overall strategies related to technology use. Double-code with descriptive codes when applicable.	New computers, smart boards for classrooms, laptops for teachers, overall strategies related to technology use, perspectives on technology use within school or district, new software	✓	✓	✓
$Use of time	Data that reference strategies for extending, shortening, or restructuring learning time for students, strategies for restructuring work time for staff, amount of time being added, subtracted or restructured, and the stated rationales for their use. Includes academic afterschool activities like tutoring programs.	Saturday school, academic afterschool activities, block scheduling, extra class periods	✓	✓	✓

Leadership and Staff Capacity (!): Codes in this category apply to segments of data that describe the capacity and leadership roles of different types of staff at the school.

Code	Definition	Examples	Year 1	Year 2	Year 3
!Governance	Data that address how decisions get made at the school or district. Whether decision-making is a formal or informal process. How the school or district is structured for leadership and oversight. Descriptions of positions like leadership team, school site council, leadership support staff, teacher leadership positions. Perceptions of the effectiveness of school or district governance structures. Also includes issues related to the school's level of site-based autonomy in decision-making and/or flexibility with regard to district/state directives.	Who the principal asks for input when making decisions; how much input teachers get into the decisions about their roles and responsibilities; to what extent parents have a role in decision-making; description of leadership team; extent to which the school (rather than the district, state) have authority to make decisions about practice	$Governance	✓	✓
!Other school leadership	Data that describe how other school leaders perform their duties at the school. Their styles of leadership; the amount of authority they have to make decisions; support for other leaders at the school site.	Assistant principals or coaches	*School leader *Instructional coach	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
!Principal Leadership	Information related to aspects of the school principal's leadership, including style, changes to leadership, effectiveness of leadership, and perception of leadership. This code will help define the extent to which principals are strategic, transformational, and distributive leaders. In coding, please review the definitions of each of these styles so that you are attuned to evidence specific to them.	A new principal, authoritarian leadership, distributive leadership, good or bad perceptions of the principal's leadership style and/or ability	$Leadership	✓	✓
!Staff Capacity	Data that address the extent to which different staff members at the school or district (teacher, coach, principal, AP, district) have the capacity to carry out their respective roles at the school. Could be evidence of high capacity, low capacity, or somewhere in between.	Poor teaching skills, lack of instructional materials for teachers, excellent managerial skills; resources (e.g., time, materials) for planning and/or providing instruction	*Capacity + stakeholder type (*Teacher, *Instructional coach, etc.)	✓	✓
!Teacher Leadership	Data that describe the leadership opportunities for teachers at the school and how teachers perform in these roles.	Teacher leaders, PLC leads	$Leadership *Teacher	✓	✓

SCHOOL SUPPORTS (SS): Codes in this category apply to segments of data that describe supports provided to the school.

Code	Definition	Examples	Year 1	Year 2	Year 3
SS_District	Data that describe the district role in supporting school improvement or school turnaround. How district office is involved in the school. Perceptions of usefulness/effectiveness. If descriptions also involve changes from previous years, double-code with perceived change.	Support for principals, PD, mandating policies or practices, policies, practices, or decisions made during SIG that hinder or help the change process more broadly	*District	✓	✓
SS_External Provider	Data that describe the external provider role in supporting school improvement or school turnaround. How providers are involved in the school. Perceptions of usefulness/effectiveness. If descriptions also involve changes from previous years, double-code with perceived change.	PD, instructional coaching, school oversight and management (EMO/CMO) activities	*External support provider	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
SS_Instructional Coach	Data that describe the instructional coach role in supporting school improvement or school turnaround. How coaches are involved in the school. Perceptions of usefulness/effectiveness. If descriptions also involve changes from previous years, double-code with perceived change.	PD, working directly with staff to improve instruction, leadership decisions	*Instructional coach	✓	✓
SS_State	Data that describe how the state supports the school or district in their improvement efforts or the state's role more generally. Perceptions of usefulness/effectiveness.	PD, support for SIG grant revisions, funding	*State	✓	✓
SS_Union	Data that describe the union's role in the school or district. This could be a supportive role, or one that is more in conflict with the school's improvement plan. Union perspective on SIG or SIG-related activities should be double-coded with the appropriate descriptive code (e.g., Evaluation, Staffing, SIG Processes).	Contract negotiations, support or lack of support for SIG	*Union	✓	✓

CONTEXT (C): Codes in this category apply to segments of data that reference aspects of school context including, but not limited to, past or present reform efforts, school history, academic performance, and student demographics.

Code	Definition	Examples	Year 1	Year 2	Year 3
C_Academic performance	Data that reference organization-level comments about the academic performance at the school or district generally. Can be this academic year or historical (e.g., history of low performance).	Low academic performance, changes in academic performance levels over time, patterns of performance among different groups of students, achievement gaps, reasons for high or low levels of academic performance	✓	No equivalent code	No equivalent code
C_Commitment to school	Data that reference the extent to which respondents express commitment to the school themselves or describe perceptions of other people's commitment to the school. Double-code with parent, teacher, student, etc. depending on the stakeholder group that is being described in the data.	Longevity at the school, level of involvement in school activities, both professional and extracurricular	✓	No equivalent code	No equivalent code
C_Commitment to students	Data that reference the extent to which respondents express commitment to the students themselves or describe perceptions of other people's commitment to the students. Double-code with parent, teacher, principal, etc. depending on the stakeholder group that is being described in the data.	Descriptions of time spent with students that goes beyond traditional job expectations, participation in extracurricular activities as a mentor or a coach	✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
C_Community relations	Data that reference the relationship among community members. This includes the relationships between community members, community members and students, community members and the school/school staff.	The relationship (good or bad) between community members and the principal and/or school. The relationship between two separate groups or different neighborhoods within the same community.	✓	No equivalent code	No equivalent code
C_Culture	Data that reference the type of culture that exists at the school or district and whether the school culture has changed over time and why.	Positive, negative, supportive, collaborative, welcoming	✓	No equivalent code	No equivalent code
C_District_school history	Data that describe events pre-dating SIG that were integral in shaping the current district or school context.	Prior reform efforts; demographic shifts; history of school violence; major staffing changes; leadership instability; school restructuring; school boundary changes; prior district-wide reform efforts; district boundary changes; school openings or closures; school reorganizations; demographic shifts; leadership instability; school board relationships	C_Reform history	✓	✓
C_Facilities	Data that refer to the condition of school facilities or changes that have been made that relate to school facilities (like moving to a new facility).	New building, more lighting, upgraded desks/furniture, dirty or worn down, new playground	✓	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
C_Funding	Data that refer to the overall amounts of money reaching the school or district. Data could relate to levels of sufficiency, changes to funding levels over time, various funding streams and the levels of funding associated with each one. May be used in conjunction with Sustainability codes in Year 3 to discuss how SIG activities will be continued. Should not be used with SIG_Funding unless respondent is discussing how SIG funds fit within the larger funding context in the school, district, or state.	Lack of funding, funding from other grants or state funding, decline in funding, district funding, budget cuts	C_Level of funding	✓	✓
C_Location	Data that describe school or district geography; defining characteristics of a school or district that are related to its geography/location. Includes whether the school is situated in a setting that would be categorized as rural and also any transportation issues that are related to the school or district's location.	Urban, isolated, surrounded by public housing, district very spread out, rural	✓	✓	✓
C_Misc	Data that reference school context issues that are not adequately covered through other codes, but describe an element of school context that may be important to understand.		✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
C_Policy Environment	Data that describe state, district, or local policy that impact activities at the school site or activities related to SIG and SIG implementation. Also includes data on policies that impact ELL instruction and supports (e.g., policies that govern how ELLs are identified or exited from ELL status, what types of instructional models are used for ELLs and how those models must operate, how ELLs are placed into classes or instructional programs, what standards/assessments are used).	District politics, school board or community-level activities, state or district requirements to use particular types of ELL programming (e.g., mainstreaming, co-teaching)	C_Local politics *State *District *School	✓	✓
C_Race relations	Data that reference situations or conditions that exist at a school or within a district because of issues related to race.	Gangs (if race-related), tensions between parents or students of different races, school violence, tension between teachers and students	✓	No equivalent code	No equivalent code
C_Size	Data that describe how size of classes, schools, or districts are important to school context.	Large class sizes, small school, large school, declining enrollment	✓	✓	✓
C_Stability	Data that capture degree of stability at the school- or district-level across a variety of constructs including funding, leadership, teacher population, school board, reform policies or change strategies. Student mobility/stability issues are captured under student demographics.	Continuity of funding, leadership, students, teachers	✓	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
C_Student population	Data on the types of students that attend the school or district and their breakdown by subgroup and poverty-levels. Also, the degree to which student mobility is an issue.	Includes race, socioeconomic status, ELL, special education, socio-emotional challenges faced by students, family composition	C_Student demographics	✓	✓

School Climate (^): Codes in this category apply to segments of data that reference the climate within the school.

Code	Definition	Examples	Year 1	Year 2	Year 3
^Attendance	Data that refer to attendance of students and staff in the school. Could be challenges like high student or teacher absenteeism or the opposite.	High teacher absenteeism, many teachers on sick or maternity leave, low student attendance rates, frequent need for substitute teachers	C_Attendance	✓	✓
^Buy-in	Data that discuss the extent to which teachers are "bought in" or in support of school or district policies, reform agendas, leadership approaches, administrators, other teachers	Lack of support for new principal, highly supportive of new literacy curriculum	%Buy-in	✓	✓
^Collaboration	Data that reference professional learning opportunities that focus on building collaboration between school stakeholders. This could be formal or more informal. It may be between only teachers, but could also be between teachers and administrators. Structured opportunities for common planning time for teachers either within or across grade level or subject.	Department team meetings, school leadership teams, common planning time	$Collaboration	✓	✓
^Community Involvement	Data capturing the extent to which community members/groups are involved in school activities. Can be from various stakeholders' perspectives (teachers, principals, parents, students). Data that discuss strategies for improved involvement or strategies that have already improved involvement should also be included.	Strategies for involving community members, community members attend town hall meetings, community members support the school, history of community involvement, community liaisons	$Engagement *Community	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
^Expectations for staff	Data on district, school, community, student expectations for staff. Changes to these expectations.	Principals have high expectations for teachers, teachers are expected to improve student outcomes, teachers are expected to work after school/on weekends, students look for emotional support from teachers	No equivalent code	✓	✓
^Expectations for students	Data on district, school, community, family expectations for students. Changes to these expectations.	Teachers have high expectations, teachers lower expectations to meet students' performance level	No equivalent code	✓	✓
^Parent Involvement	Data capturing the extent to which parents at the school are involved in school community and/or their students' education. Can be from various stakeholders' perspectives (teachers, principals, parents, students). Data that discuss strategies for improved involvement or strategies that have already improved involvement should also be included.	Strategies for involving parents, parents attend teacher conferences, parents are responsive to calls/emails from teachers, parents attend classes offered by school, parent liaisons	$Engagement *Parent	✓	✓
^School Safety	Data that refer to the safety/orderliness of the school environment only within the school. Also includes whether safety issues have changed over time.	Violent incidence rates, security guards, environment specialists, security devices, metal detectors	C_Safety	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
^Staff Engagement	Data capturing the extent to which staff at the school are engaged or not in their work. Can be from various stakeholders' perspectives (teachers, principals, parents, students). Change in levels of engagement over time or because of certain activities.	Staying long hours, dedication and investment to work, willingness to do unpaid work	No equivalent code	No equivalent code	✓
^Student Behavior	Descriptions of current or past trends in behavior of students at the school. Can be general school-wide behavior or also data related to student behavior by subgroup. Includes student behavior issues that are the result of racial tensions or evidence of positive student behaviors.	School bullying, fights between students based on race, issues with suspension or expulsion of students, classroom management	C_Behavior	✓	✓
^Student Engagement	Data capturing the extent to which students at the school are engaged both academically and extra-curricularly. Can be from various stakeholders' perspectives (teachers, principals, parents, students). Data that discuss strategies for improved engagement or strategies that have already improved engagement should also be included.	Strategies for improved student engagement or evidence of existing levels of student engagement. Includes: students are prepared for class and involved in the lessons, students attend tutoring sessions, students attend Saturday school or summer school, involvement in sports teams or other activities	$Engagement *Student	✓	✓
^Student Supports	Activities or resources offered to students to improve their overall academic performance or to address socio-emotional challenges.	School counselor, help hotlines, tutoring programs, after-school enrichment programs, social workers, medical services	$Student Supports	✓	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
^Teacher Morale	Data capturing the entire spectrum of teacher morale at a school—high to low. Related to buy-in in that data describing instances of low morale among staff.	Improved teacher morale, decline in morale, school pride	*Morale *Teacher	✓	✓
^Trust	Data that describe the mutual respect among teachers, school leaders, staff, parents, and community. Data can describe trust processes, how it is being established, or if it needs to be established to move forward with school improvement efforts.	Principal trust in teachers; parent trust in school	No equivalent code	No equivalent code	✓

Sustainability: Codes in this category apply to segments of data related to the sustainability of improvements and of specific activities.

Code	Definition	Examples	Year 1	Year 2	Year 3
Sustain_Improvements	Perceptions about the likelihood that school, district, or specific stakeholders will be able to sustain outcomes related to school improvement. If no improvement in school outcomes were reported over the course of SIG but respondents talked about activities that they were engaged in that they perceived would likely lead to positive outcomes if sustained passed SIG, include those comments here. Also include all discussions about rationale for coded perceptions.	Student outcomes, culture/climate improvements, improved instruction, improved leadership	No equivalent code	SC_Sustainability	✓
Sustain_Steps being taken	How district or school activities being paid for by SIG funding will be (or will not be) continued in the future. Any data that touches on the plans being taken to keep SIG-related activities or specific processes that schools and districts will use to adapt SIG activities post-SIG.	Looking to district for funding; writing grants for funding; reorganizing school schedule	No equivalent code	SC_Sustainability	✓

Code	Definition	Examples	Year 1	Year 2	Year 3
Sustain_Activities	Data on the specific activities or practices that SIG schools are choosing to sustain or not, and why these choices have been made. Related to Sustain_Improvements so be mindful about the overlap and double-code when necessary. Includes specific staff hired through SIG.	Extended day, instructional coaches, work with external partner, technology adoption	No equivalent code	SC_Sustainability	✓

TEACHER-SPECIFIC (T): These codes apply to segments of data that are associated with individual teacher participants. Primarily, they are used to capture teachers' goals for their students as well as data on how teachers are gauging success in their classrooms.

Code	Definition	Examples	Year 1	Year 2	Year 3
T_Goals for students	Data that reference teachers' descriptions of the goals they've established for their students.	Standardized test performance, literacy, high school graduation, socio-emotional goals	✓	No equivalent code	No equivalent code
T_Measuring success	Data that reference how teachers measure their students' success in meeting the goals that they established for them	Benchmark assessments, formative assessments, informal tools	✓	No equivalent code	No equivalent code
T_Teacher quality	Data that reference students, teachers, and parents' perceptions about what makes a high-quality teacher. This question comes up mostly in the student and teacher focus groups.	Group work, patience, attention to all students, ability to explain concepts in multiple ways, encouraging, supportive, communicates well with parents	✓	No equivalent code	No equivalent code

MULTIPURPOSE CODES (*): Codes in this category apply to segments of data from individual interviews and focus groups. These codes are used primarily in conjunction with codes from other categories to specify specific stakeholder groups involved in activities or constructs being discussed (e.g., school leader/district leader/teacher) or capture constructs that fall outside of the remaining categories. NOTE: There is no **School** multipurpose code because the school is the unit of analysis and assumed to be the default by study participants.

Code	Definition	Examples	Year 1	Year 2	Year 3
***Change Strategy**	Data that reference over-arching school or district-wide change strategies meant to "turnaround" low-performing schools, or more targeted change actions and strategies focused on a specific area of reform (e.g., curriculum or data use).	Curriculum, data use, student supports, change school culture, improve instruction	✓	School change codes (See SC section above)	School change codes (See SC section above)
***District Leader**	Data that reference high-level district leaders, such as superintendent or director of elementary education. Used in addition to other codes on the list for segments of data that are specific to the district leader (personal background of district staff), or reflect a perspective on district leadership (either by teachers, principal, parents, students, or other school staff).	Role definition, capacity, problem definition	✓	SS_District code	SS_District code
***Other Funding**	Data that reference activities taking place at the school or district that are not funded by SIG.	Title 1; state improvement grants; grants for ELL or Special Education	✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
***Other School Staff**	Data that reference other school staff (e.g., social worker, counselor) roles and responsibilities, capacity to support schools, and perceptions of effectiveness or usefulness of these staff by other school stakeholders.	Efficacy of school counselors, role of school social workers or safety attendants	✓	No equivalent code	No equivalent code
***Perceived Expertise**	Data that reference the extent to which specific school or district staff have the background, training, and knowledge that are necessary and appropriate for them to do their jobs successfully. Can be a respondent's own perceptions of their expertise or someone else's perceptions of them. These perceptions must be explicitly discussed by study participants, not inferred by analysts based on data.	Past leadership experience of principal, extent to which literacy and math coaches have received training to coach other teachers in these content areas	✓	No equivalent code	No equivalent code
***Planned Activities**	Data that reference school, district or state activities that are planned but will be implemented in future years.	Evaluation systems, professional learning, new curriculum	✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
***Rationale**	Data that reference stakeholders' rationales for making choices about SIG and/or any other decisions being made at the school or district levels. This includes respondents' descriptions of their own rationales, but also respondents' descriptions of others' rationales.	Rationale about staffing, curricula, SIG applications, SIG model selection, data use, etc.	✓	No equivalent code	No equivalent code
***Role Definition**	Data that reference how study participants perceive/describe their job role and/or responsibilities. Can also include descriptions of how other stakeholders perceive the roles of their colleagues/peers. For example, this code could be used for a description of how an instructional coach perceives their job role, but also a description of how a principal perceives the job role of the same coach.	Job role, duties, responsibilities, differences in expectation of role versus reality of job	✓	No equivalent code	No equivalent code
***Strength**	Data that references something that is considered a strength for either themselves personally or the school or district as organizations.		✓	No equivalent code	No equivalent code

Code	Definition	Examples	Year 1	Year 2	Year 3
***Student**	Data that reference perspectives on students in a district or school.	Morale, buy-in, academic performance, commitment to school, engagement	✓	No equivalent code	No equivalent code
***Teacher**	Data that reference perspectives on teachers in a district or school in addition to teachers' roles and responsibilities.	Role definition, teacher background, teacher capacity, teacher morale, teacher buy-in, staffing, data use, collaboration	✓	No equivalent code	No equivalent code
***Unclear Funding**	Data that reference activities taking place at the school or district where a specific funding source cannot be identified.	Only use if the respondent is explicit about the fact that they don't know where the funding for a specific activity is coming from	✓	No equivalent code	No equivalent code

SCHOOL BACKGROUND (!): Codes in this category apply to the interviews or focus groups. Attach these codes to the top of the document once.

Code	Definition	Examples	Year 1	Year 2	Year 3
!Elementary	Interview or focus group code that refers to the type or level of school.	Schools that serve grades K-8 or any derivation of these grades	✓	Incorporated into data file name	Incorporated into data file name
!High School	Interview or focus group code that refers to the type or level of school.	Schools that serve grades 9-12 or any derivation of these grades	✓	Incorporated into data file name	Incorporated into data file name
!Restart	Interview or focus group code that refers to the SIG restart model.	As categorized in SIG subgrant application	✓	No equivalent code	No equivalent code
!Rural	Interview or focus group code that refers to schools and districts in rural area.	As categorized in 2008–09 Common Core of Data	✓	No equivalent code	No equivalent code
!Transformation	Interview or focus group code that refers to the SIG transformation model.	As categorized by SIG subgrant application	✓	No equivalent code	No equivalent code
!Turnaround	Interview or focus group code that refers to the SIG turnaround model.	As categorized by SIG subgrant application	✓	No equivalent code	No equivalent code
!Urban	Interview or focus group code that refers to schools in urban areas (including urban fringe).	As categorized in 2008–09 Common Core of Data	✓	No equivalent code	No equivalent code

DIMENSION CODES (%)*: Codes in this category apply to segments of data that address key first-year dimensions that are more analytic and less descriptive. These codes can be applied to data from all stakeholder groups at the state, district, and school levels. These codes are used to "tag" data related to divergence.

Code	Definition	Examples	Year 1	Year 2	Year 3
%Divergence	Data that reference the extent to which activities are similar or different from activities that the school has implemented in the past. Determining similarity can involve issues of intensity or newness.	Continuation of an existing reform in a more intense manner, implementation of an entirely new reform	✓	No equivalent code	No equivalent code

* Two other dimension codes used in year 1—buy-in and coherence—were included under different categories in subsequent years. Please reference the School Change category and the School Climate category.

TAGS (&): These codes are used to identify specific questions and answers from the protocol that will contribute to more complex secondary analysis.

Code	Definition	Examples	Year 1	Year 2	Year 3
&Lessons Learned	Data corresponding to questions asked about lessons learned.	**Spring 2013:** District Protocol Question 16 **Fall 2012:** Principal Protocol Questions 5-6, Coach Protocol Question 11, and District Protocol Questions 9-10	No equivalent code	No equivalent code	✓
&Story Line	Data corresponding to questions like, "If you were to tell the improvement story of this school/these schools over the past three years, what would the story line be?"	**Spring 2013:** External Provider Question 8, Principal Protocol Question 19, District Protocol Question 10	No equivalent code	No equivalent code	✓
&Theory of Action	Data corresponding to questions specifically related to a school's theory of action.	A separate list of these questions was provided to coders	No equivalent code	No equivalent code	✓

Appendix B. Technical Approach to Qualitative Analyses

Exhibit B.1.
Perceived Change in Quality of Principal Leadership

Summary	This analysis examines perceptions of the change in quality of principal leadership for the 20 core sample schools that replaced their principal in Year 1 or Year 2 of SIG. See Chapter 3 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 1 and Year 2 interviews with teachers and instructional coaches*, including the following questions to elicit responses on changes in the quality of principal leadership (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): Teachers • How would you describe the principal? What do you think are his/her strengths? In what areas could he/she improve? Instructional coaches • How would you describe the principal? What do you think are his/her strengths? His/her weaknesses? *Year 1 and Year 2 focus groups with school improvement teams, teachers, and parents,* including the following questions to elicit responses on changes in the quality of principal leadership (Note that information may also have been obtained through other points in the focus group, not just in direct response to the question listed below. Also, the parent focus groups did not include specific questions on principal leadership.): School improvement teams • Who are the key school leaders? What role do the key leaders play? Have there been any changes since last year? Why? Teachers • Who are the key school leaders? What role do the key leaders play? Have there been any changes since last year? Why?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine perceptions of changes in the quality of principal leadership, site visitors responded to the following question(s) in the online repository based on all coded data associated with principal leadership [!Principal Leadership]: • [Year 1] Please describe the conditions under which the principal came to this school. For example, did he or she come to the school willingly? Did the district impose the principal on the school? How soon before the start of the school year did the principal arrive? Please note the respondents who provided data on this topic and if there were differing perspectives. • [Year 1] How did stakeholders describe the leadership style of the principal? Centralized or more distributed? Other features? Please identify the respondents who provided data on features of principal leadership. • [Year 1] In general, was the principal perceived as a catalyst for change in the school? Did stakeholders attribute any signs of initial progress to the principal's leadership? Please note the respondents who provided data on perceptions of the principal's contribution to the change process.

Exhibit B.1.
Perceived Change in Quality of Principal Leadership *(continued from previous page)*

	Technical Detail

Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	• [Year 2] Please describe the current principal's leadership style. How does the principal interact with teachers, office staff, and students? Does the principal spend time in classrooms, hallways, and his/her office? How would you describe the principal's level of morale (e.g., optimistic, frustrated, apathetic)? To what extent does the principal develop leaders?
	• [Year 2] Based on your description of the principal's leadership style, please consider all of the options listed below and use the text box to indicate which respondents described the principal in this manner.
	  ○ Accessible/welcomes input
	  ○ Supportive of staff
	  ○ Visionary
	  ○ Enthusiastic
	  ○ Communicative
	  ○ Develops leaders
	  ○ High expectations
	  ○ Instructional leaders
	  ○ Other
	• [Year 2] If applicable, please describe the circumstances that led to the change in principals. Please include where the previous principal was employed in 2011–12, and where the current principal was hired from, if known. If there is not sufficient information on this topic, please indicate so below. Make sure to include both fall 2011 and spring 2012 data in your response.
	Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Stage 2: School Classification Procedures	Using the responses to the questions above, analysts categorized schools using the classification scheme on perceptions of changes in the quality of principal leadership described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above (excluding newly hired staff). *Quality of principal leadership improved* • Respondents in at least two respondent groups described the change in principal in positive terms; AND • No more than one respondent described the change in principal in negative terms. *Quality of principal leadership did not change* • Respondents did not comment on the quality of the change in principal leadership or described the change in neutral terms. *Quality of principal leadership declined* • Respondents in at least two respondent groups described the change in principal in negative terms; AND • No more than one respondent described the change in principal in positive terms.
Caveats	These school-level classifications do not include objective indicators of principal leadership quality. Rather, they are based on an aggregate reflection of respondent perceptions of changes in the quality of principal leadership.
Notes	Includes 20 core sample schools that had a new principal in Year 1 or Year 2 of SIG (2010–11 or 2011–12).

Exhibit B.2.
Impetus for Principal Replacement

Summary	This analysis examines whether principal replacement was perceived as a deliberate effort to improve capacity for the core sample schools that replaced their principal for Year 2 of SIG. See Chapter 3 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, teachers, and instructional coaches*, including the following questions to elicit responses on principal replacement (Note that information may also have been obtained through other points in the interviews, not just in direct response to the questions listed below.): District administrators • Why do you think the principal [*at each of the core sample schools in the district*] was selected for the school? Principals • What are the circumstances that brought about the change in principal at your school this year? Teachers • Have there been any significant changes in the school since the fall that we should know about? Please describe. Instructional coaches • Have there been any changes in the leadership at the school? *Year 2 focus groups with teachers,* including the following questions to elicit responses on principal replacement (Note that information may also have been obtained through other points in the focus group, not just in direct response to the question listed below.): Teachers • Who are the key school leaders? What role do the key leaders play? Have there been any changes since last year? Why?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine perceptions regarding the impetus for principal replacement, site visitors responded to the following question in the online repository based on all coded data associated with principal leadership and staffing [!Principal Leadership, $Staffing]: • If applicable, please describe the circumstances that led to the change in principals. Please include where the previous principal was employed in 2011–12, and where the current principal was hired from, if known. If there is not sufficient information on this topic, please indicate so below. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Exhibit B.2.
Impetus for Principal Replacement *(continued from previous page)*

	Technical Detail
Stage 2: School Classification Procedures	Using the responses to the question above, analysts categorized schools using the classification scheme on impetus for principal replacement described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Principal replaced as a deliberate effort to improve capacity* • A district administrator or at least one school-level respondent (principal, teacher, or instructional coach) reported that the principal was replaced to improve the capacity of the school (e.g., previous principal "was a poor fit for the job"). *Principal replaced for other reasons* • A district administrator or at least one school-level respondent (principal, teacher, or instructional coach) reported that the principal was replaced because the previous principal left for personal reasons or as a result of a promotion.
Notes	Includes 9 core sample schools that had a new principal in Year 2 of SIG (2011–12).

Exhibit B.3.
Perceptions of Distributed Leadership in Core Sample Schools

Summary	This analysis examines the extent to which core sample schools were perceived as having the structures and opportunities to support distributed leadership. See Chapter 3 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals, teachers, instructional coaches, and external support providers*, including the following questions to elicit responses on leadership and decision-making (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>Principal</u> • How do you view your role as principal? • In reflecting on your leadership role, what do you believe are your strengths? In what areas do you think you could improve? • Please tell me about the school's leadership team (e.g., assistant principals, coaches, teacher leaders, etc.) and how you work with them. What is your role in selecting and developing the leadership team? • Who else provides leadership in this school? • How do decisions get made within the school? As the principal, do you make the final decisions about key aspects of the school, such as staffing, scheduling, curriculum, professional learning, and budget? Why or why not? <u>Teachers and instructional coaches</u> • What role does the principal play at the school? • How would you describe the principal? What do you think are his/her strengths? His/her weaknesses? • Who are the other leaders at the school, and what role(s) do he/she/they play? How would you characterize the school's leadership? • Have there been any changes in the leadership team and the roles of its members since the fall? Please describe. • To what extent can staff/teachers at this school get involved in school decision making? What avenues are available to teachers to provide their input? Please describe. • In what ways does the school leadership support you in your work? <u>External support providers</u> • What role does the principal play at the school? • How would you describe the principal? What do you think are his/her strengths? In what areas could he/she improve? • Who are the other leaders at the school, and what role(s) do he/she/they play? Do you have any interaction with them? • What role does each member of the leadership team play? Have there been any changes since last year? *Year 2 focus groups with school improvement teams and teachers,* including the following questions to elicit responses on leadership and decision-making (Note that information may also have been obtained through other points in the focus group, not just in direct response to the question listed below.): <u>School improvement team</u> • What is the mission of the school improvement team (SIT)? Has the mission changed since the 2011–12 school year? If so, how? Why? • What have been the SIT's specific responsibilities this school year?

Exhibit B.3.
Perceptions of Distributed Leadership in Core Sample Schools *(continued from previous page)*

	Technical Detail
Data Sources *(continued from previous page)*	• To what extent has the work of the SIT influenced the school's policies and improvement strategies? Please provide examples. Has this changed from last year? How? Why? • Who are the key school leaders? What role do the key leaders play? Have there been any changes since last year? Why? <u>Teachers</u> • Who are the key school leaders? What role do the key leaders play? Have there been any changes since last year? Why? To what extent can staff/teachers at this school get involved in school decision making? What avenues are available to teachers to provide their input?
Stage 1: Identifying Features of Distributed Leadership	Based on the literature (Coburn et al., 2003; Lewis et al., 2010), the study team identified the following six features associated with distributed leadership: • Clear set of responsibilities for school leadership team • School leadership team membership open to nonadministrative school staff • School leadership team involvement in decision-making process • Nonteaching staff (e.g., assistant principals, instructional coaches) involvement in decision-making process • Teacher involvement in decision-making process • Opportunities for teachers to assume leadership roles

Stage 2: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the school's leadership structures and decision-making processes, site visitors responded to the following questions in the online data repository based on all coded data associated with governance and leadership [!Governance, !Principal Leadership, !Teacher Leadership, !Other Leadership, SS_Instructional Coach, SS_External Provider, and ^Collaboration]:
	• Please describe the school's governance structure, including who provides instructional and administrative leadership at the school—remember to explain who provided evidence for this and why they identified certain people as leaders at the school. Include a brief description of how decisions are made (including formal and informal structures for decision-making), which stakeholders are involved, and perceptions of the effectiveness of the governance structure.
	• Is there a leadership team at the school?
	  ○ Yes
	  ○ No
	• If there is a leadership team at the school, please indicate when it was established.
	  ○ Prior to SIG
	  ○ Year 1 of SIG
	  ○ Year 2 of SIG
	  ○ Year 3 of SIG (Planned)
	  ○ Not enough information to answer this question
	If the leadership team was established in Year 1 of SIG or after, please explain why it was created (e.g., improving communication, increasing buy-in, etc.)

Exhibit B.3.
Perceptions of Distributed Leadership in Core Sample Schools *(continued from previous page)*

<table>
<tr><th></th><th>Technical Detail</th></tr>
<tr><td>Stage 2: Qualitative Data Analysis Procedures (continued from previous page)</td><td>

If there is a leadership team at the school, please describe:

Who is on the leadership team? (how many stakeholders, which stakeholders, how and why those stakeholders got selected to be on the leadership team)
The role of the leadership team at the school. Please give at least two examples of the types of decisions that get made by the leadership team.

If there is no leadership team at the school, please describe other leadership structures at the school and how decisions get made at the school.
Please provide additional detail on other formal structures of governance at the school (e.g., departmental committees, grade-level teams, administrative committees). Please explain who is involved in these other governance structures and what role these other governance structures play in the school.
Please describe informal leadership opportunities at the school (e.g., opportunities for teachers to lead professional learning opportunities, to provide input on curriculum, or to take on other leadership roles).
To what extent are each of the stakeholders below involved in the decision-making process at their school?

<table>
<tr><th></th><th>Principal</th><th>Other School Administrators</th><th>District Administrators</th><th>Instructional Coaches</th><th>External Providers</th><th>Teacher Leaders</th><th>Teachers</th><th>Other</th></tr>
<tr><td>Not involved: Respondents did not mention being involved in the decision making process at the school</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Somewhat involved: Respondents mentioned having input and partaking in some decision-making processes at the school, such as helping with the master schedule or student groupings</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Highly involved: Respondents mentioned having a large say in major decisions at the school, such as selecting curriculum or selecting the instructional focus for a grade level</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Final say: Respondents mentioned having the final word or decision-making power</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Taking into account formal and informal leadership, has the leadership structure or practice (who is doing what and how) changed since the beginning of SIG?

Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.
</td></tr>
</table>

Exhibit B.3.
Perceptions of Distributed Leadership in Core Sample Schools *(continued from previous page)*

	Technical Detail
Stage 3: School Classification Procedures	For each feature associated with distributed leadership, analysts first determined whether the school exhibited the feature using the following decision rules: • *Clear set of responsibilities for school leadership team*. At least one member of the school leadership team reported that the team has a clear set of responsibilities. • *School leadership team membership open to the nonadministrative school staff.* At least one member of the school leadership team suggested that the school leadership team is open to nonadministrative school staff. • *School leadership team involvement in decision-making process*. The principal indicated that the school leadership team is involved in decision making. • *Nonteaching staff involvement in decision-making process*. A respondent from at least two of the following respondent groups—assistant principal, instructional coach, or other school administrator—indicated that the principal makes decisions with input from nonteaching school staff. • *Teacher involvement in decision-making process*. At least two teachers indicated that the principal makes decisions with input from teachers. • *Opportunities for teachers to assume leadership roles*. At least two teachers indicated that there are leadership opportunities for teachers. Analysts then classified the core sample schools based on the classification scheme on distributed leadership described below. Because there were no natural breaks in the distribution, cut points were set to divide the schools roughly into thirds. When the classifications were complete, the lead site visitor for each school was required to review and verify the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Structures and opportunities to support distributed leadership* • Perceived to exhibit at least five of the six features associated with distributed leadership. *Moderate structures and opportunities to support distributed leadership* • Perceived to exhibit three or four of the six features associated with distributed leadership. *Little/no structures or opportunities to support distributed leadership* • Perceived to exhibit less than three of the six features associated with distributed leadership. Analysts also reviewed the data—specifically the questions about changes between Year 1 and Year 2 of SIG—to determine whether or not the structures to develop distributed leadership existed prior to SIG and if principals undertook efforts to develop distributed leadership during Year 1 or Year 2 of SIG. Schools were classified as having made efforts to build infrastructure to support distributed leadership during SIG if at least one respondent from the respondent groups listed above provided a clear statement regarding the year of a new structure.
Notes	Includes 25 core sample schools. Data from Year 2 of SIG was supplemented with data and findings from Year 1 of SIG.

Exhibit B.4.
Teaching Staff Stability in Core Sample Schools

Summary	This analysis examines the amount of turnover of the teaching staff in the core sample schools at the beginning of Years 1 and 2 of SIG implementation. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, teachers, and instructional coaches,* including the following questions to elicit responses on the stability of the teaching staff. (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): District administrators • Have the schools experienced changes related to staffing—principals and teachers—since last year? Please describe. What were the reasons for any changes? Principal • What was the school's experience with teacher turnover at the start of this school year? Teachers • Have there been any significant changes in the school since last year? Please describe. Instructional coaches • To what extent have there been changes at your school from last year to this year? Please explain. *Year 2 focus groups with teachers*, including the following questions to elicit responses on the stability of the teaching staff (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): Teachers • Have there been any significant changes in the school since last year? Please describe. *Findings from the Year 1 SST report on the analysis of improvement actions implemented in core sample schools* (see Exhibit B.8 in Le Floch et al., 2014)
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the stability of the teaching staff, site visitors responded to the following question in the online data repository based on all coded data associated with staffing [$Staffing]: • What was the school's experience with staff changes (and/or stability) in the 2011–12 school year (and why)? Please include context from 2010–11 (Year 1 of SIG) and earlier, as needed. • What proportion of the school's teachers was new in Year 2 of SIG, according to respondents? How much teacher turnover did the school experience? (If the school had teacher position openings that it could not fill, please note that as well.) Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Exhibit B.4.
Teaching Staff Stability in Core Sample Schools *(continued from previous page)*

	Technical Detail
Stage 2: School Classification Procedures	Using the responses to the Year 2 repository questions and findings from the Year 1 report, analysts categorized schools based on the classification scheme on teacher stability described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Greater than half of teachers each year* • At least two respondents reported that at least 50 percent of the teaching staff was new at the beginning of both Years 1 and 2 of SIG. *Less than half of teachers in one year, and more than half of teachers in the other year* • At least two respondents reported that at least 50 percent of the teaching staff was new at the beginning of Year 1 but not Year 2, or vice versa. *Less than half of teachers each year* • At least two respondents reported that less than 50 percent of the teaching staff was new at the beginning of both Years 1 and 2 of SIG.
Caveats	The data collected in Year 1 did not allow a more detailed analysis of stability than the 50 percent threshold. In addition, these school-level classifications are not based on a review of teacher roster data, but rather on respondent perceptions of changes in the teaching staff.
Notes	Includes 25 core sample schools.

Exhibit B.5.
Perceptions of the Teacher Replacement Process

Summary	This analysis examines perceptions of the teacher replacement process (i.e., the rules governing the hiring and removal of staff and the extent to which principals and teachers were involved in the replacement process) for the core sample schools that replaced at least half of their teaching staff in Year 2 of SIG. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, and teachers*, including the following questions to elicit responses on the teacher replacement process (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrator</u> • Is there a district-wide approach to instructional improvement planned/being implemented for the SIG schools? What specific strategies are involved in this approach? Please explain. • For each school, what instructional improvement strategies were planned/implemented this school year? What is the rationale behind these strategies? • In SIG schools in which the principal and many staff members were replaced, how were decisions made about which staff to keep and which to let go? What was the rationale? • Do you have any strategies in place to recruit and retain high quality/effective teachers and principals? To improve the knowledge and skills of teachers and principals through professional learning? <u>Principal</u> • Could you describe the specific improvement strategies your school has implemented this school year? How have you prioritized these strategies? • Were any teachers or other staff replaced? If so, when and which staff were replaced, and why? • How would you describe the staff in this school? <u>Teachers</u> • Are there some broad approaches or strategies that the school as a whole is following to reach its improvement goals? What are they, and do you think they are appropriate or likely to be effective? • Can you describe some of the specific improvement strategies that you know are, or will be, adopted at your school this school year as part of SIG? • How would you describe the teaching staff at this school? What are their strengths and weaknesses as a staff? *Year 2 focus groups with teachers*, including the following questions to elicit responses on the teacher replacement process (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>Teachers</u> • Can you describe some of the specific improvement strategies that were, or will be, adopted at your school this school year? • Do you think the improvement strategies fit the needs of the school and/or students? • What will be the greatest challenges to implementing these strategies?

Exhibit B.5.
Perceptions of the Teacher Replacement Process *(continued from previous page)*

	Technical Detail

Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of the teacher replacement process, site visitors responded to the following questions based on the coded data (specific codes used are provided in brackets):
	• Please categorize your school along the continuum using the check boxes below if at least three respondents provide evidence that the school belongs in the specific category. [$Staffing, !Staff Capacity]
	  ○ New staff were perceived as skilled/motivated, bringing energy and expertise into the school, and building the school's human capacity. At the same time, prior staff may be perceived as unskilled/unmotivated.
	  ○ New staff were perceived as unskilled/unmotivated, detrimental to the school in a way that limits its instructional capacity.
	  ○ Changes in staff were perceived as maintaining the status quo, not changing the human capital capacity of the school.
	• Please add details about your response above, citing evidence and sources.
	Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy.

Stage 2: School Classification Procedures	Using the responses to the questions above, analysts categorized schools using the classification scheme on perceptions of the teacher replacement process described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above (excluding newly hired staff). *Positive* • At least three respondents indicated that the new teachers introduced as part of the replacement process were beneficial (i.e., "bringing new energy," improving staff morale, increasing teacher quality); AND • No respondent described the teacher replacement in terms such as "biased" or "unfair." *Neutral* • Respondents did not comment on the quality of the teacher replacement process or the quality of new teachers, or described the process in neutral terms, such as "another instance of change." *Negative* • At least three respondents indicated that the new teachers introduced as part of the replacement process were detrimental to the school (i.e., weakening staff morale, decreasing teacher quality); OR • At least three respondents described the teacher replacement process in terms such as "biased" or "unfair."
Caveats	This analysis is not an examination of teacher effectiveness, and it is not intended to imply a causal connection between teacher replacement and changes in teacher effectiveness. Rather, this analysis is an aggregate reflection of the perceptions of respondents regarding the teacher replacement process.
Notes	Includes 2 schools that replaced at least half of their teaching staff in Year 2 of SIG (findings for the 9 core sample schools that replaced at least half of their teaching staff in Year 1 are taken from the Year 1 SST report [see Le Floch et al., 2014]).

Exhibit B.6.
Creation of Nonteaching Positions in Core Sample Schools

Summary	This analysis examines the creation of nonteaching positions in Years 1 or 2 of SIG in core sample schools. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 1 and 2 interviews with district administrators, principals, teachers, and instructional coaches,* including the following questions to elicit responses on new nonteaching staff positions. (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • *Year 1:* For each school, what instructional improvement strategies are being planned/implemented? • *Year 2:* Have the schools experienced changes related to staffing—principals and teachers—since last year? Please describe. <u>Principals</u> • *Year 1:* Could you describe the specific improvement strategies your school has implemented this school year? • *Year 1:* How would you describe the staff in this school? Were there any changes to personnel this school year?) • *Year 2:* Have there been any significant changes in the school since the fall that we should know about? Please describe. • *Year 2:* What have been the school's recent experiences attracting/recruiting qualified staff? <u>Teachers</u> • *Year 1:* Can you describe some of the specific improvement strategies that are, or will be, adopted at your school this school year? • *Year 2:* What are the main ways in which the school is working to accomplish its goals? What specific activities are being implemented? Please describe. <u>Instructional coaches</u> • *Year 1:* Can you describe some of the specific improvement strategies that are being, or will be, adopted this school year? • *Year 2:* In our previous conversation, you had mentioned the school is implementing the following key improvement strategies. To what extent have these strategies changed during this school year? *Year 1 and 2 focus groups with school improvement teams and teachers*, including the following questions to elicit responses on new nonteaching staff positions (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>School improvement teams</u> • *Year 1:* How do you think the SIG improvement approaches/strategies identified for the school will address the issues facing the school? Please describe how you think specific improvement strategies are working, or will work, to improve the school. • *Year 2:* In our previous conversation, you had mentioned the school is implementing the following key improvement strategies. To what extent have these strategies changed during this school year?

Exhibit B.6.
Creation of Nonteaching Positions in Core Sample Schools *(continued from previous page)*

	Technical Detail
Data Sources *(continued from previous page)*	Teachers • *Year 1:* Can you describe some of the specific improvement strategies that are, or will be, adopted at your school this school year? • *Year 2:* What are the main ways in which the school is working to accomplish its goals? What specific activities are being implemented? Please describe.

Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the creation of nonteaching positions, site visitors responded to the following questions in the online data repository, separately for Year 1 and Year 2, based on all coded data associated with staffing [$Staffing].
	• Were any new nonteaching positions created?
	  ○ Yes
	  ○ No
	• If so, please list the number of new nonteaching positions, by type.
	  ○ Administrator
	  ○ Instructional coach
	  ○ Community/parent liaison
	  ○ Other
	• Please add details about each new position, citing evidence and sources.
	Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Stage 2: Classification Procedures	Using the repository responses to the questions above, analysts determined whether a new nonteaching position had been created using the criteria described below. When the analysis was complete, the lead site visitor for each school reviewed and verified the results of his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Position created* • At least one respondent reported that a new nonteaching position (e.g., administrator, coach, community/parent liaison, or other) was created at the school.
Notes	Includes 25 core sample schools.

Exhibit B.7.
Principal's Approach to Staffing Decisions in Core Sample Schools

Summary	This analysis examines the extent to which principals at core sample schools demonstrated a purposeful approach to staffing decisions in Year 2 of SIG. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators and principals,* including the following questions to elicit responses on staffing (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): District administrators • What have been the district's experiences in attracting/recruiting qualified teachers to work in SIG schools? How, if at all, have these experiences differed between SIG and non-SIG schools and across SIG schools? • What is the process for filling open teacher positions in the SIG schools? Is this any different for non-SIG schools? Have there been any changes in the process between the last school year (2010–11) and this school year (2011–12)? • Do the SIG schools have discretion in identifying and "letting go" ineffective teachers? • What strategies, if any, exist to encourage qualified staff to remain at the SIG schools? If any, when were these strategies first implemented? How do they differ from non-SIG school strategies? Principals • What have been the school's recent experiences attracting/recruiting qualified staff? Is the school able to attract qualified—i.e., skilled and motivated—teachers? Why or why not? What factors contribute to these experiences? • What strategies, if any, exist to encourage qualified staff to remain at the school? Are these unique to the school? *Year 2 focus groups with school improvement teams* (No specific questions were asked. Information for this analysis may have been captured at multiple points in the focus group.)
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the level of purposefulness in the principals' approach to staffing, site visitors responded to the following questions in the online data repository based on all coded data associated with staffing [$Staffing]: • What was the school's experience with staff changes (and/or stability) in the 2011–12 school year and why? Be sure to mention the principal, teachers, and coaches (or other staff as needed). Please note that this includes turnover, intentional staffing changes (hiring/removal), as well as changes in staff responsibilities/assignments within the school (includes changes to get staff into the "right spot," as well as more disruptive staff responsibility changes). • Please describe the school's and/or its district's strategies to recruit and retain qualified staff, noting the extent to which the school (and/or union) is able to leverage SIG to do so. Please note the extent to which the school expects strategies to address (or not address) recruitment and retention needs, and please explain why. Also, indicate whether these actions are or are not special to SIG schools in the district and/or other similar schools (i.e., low-performing, rural) in the district. Cite evidence and sources.

Exhibit B.7.
Principal's Approach to Staffing Decisions in Core Sample Schools
(continued from previous page)

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	• According to respondents, to what extent was any change in the school's staff (teachers, principals, coaches, or other staff) part of a *purposeful strategy* to build the school's staff capacity (that is, the collective skills/knowledge of adults at the school)? Please describe the change and extent to which decisions were motivated (or perceived to be motivated) by school needs (e.g., need for a more skilled/ motivated staff, need for staff in a certain subject area, etc.), and who was making those decisions. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.
Stage 2: School Classification Procedures	Using the principal reports identified in the repository responses and coded data from the principal interviews, analysts categorized schools based on the classification scheme on the purposefulness of the principal's staffing approach, described below. Data from other respondents, including district administrators and school improvement teams, provided details about the principal's approach to staffing decisions. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Purposeful approach to staffing decisions* • The principal clearly articulated how staffing decisions addressed school goals or needs (e.g., removing a teacher due to poor performance and replacing her with someone with the "right" skill set and strong motivation, or reassigning teachers to different grades to better align their skills to students' needs; creating an additional instructional coach position to give teachers "the support that they need"). *No evidence of purposeful approach to staffing decisions* • The principal clearly articulated how staffing decisions were not aligned with school goals or needs (e.g., accepting low-quality teachers due to district mandate); OR • The principal did not provide any evidence on how staffing decisions addressed school goals or needs (e.g., replacing teachers leaving for personal reasons such as retirement or relocation).
Caveats	This analysis uses principal interviews as the primary source. Thus, this analysis is not intended to be an objective measure of the schools' approach to staffing decisions. In addition, this analysis is limited to staffing decisions that occurred during Year 2 of SIG, and thus excludes intentional staffing decisions made in Year 1, which may have continued to address school goals or needs in Year 2.
Notes	Includes 25 core sample schools.

Exhibit B.8.
Perceived Teacher Retention and Recruitment Challenges in Core Sample Schools

Summary	This analysis examines perceptions of teacher recruitment and retention challenges in the core sample schools. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals and district administrators*, including the following questions to elicit responses on staff recruitment and retention challenges (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>Principal</u> • What have been the school's recent experiences attracting/recruiting qualified staff? Has this changed since last year? If so, how? Why or why not? How, if at all, is the process for filling open teacher positions in the school different from non-SIG schools? Please explain. • What was the school's experience with teacher turnover at the start of this school year? Do you anticipate there will be any teacher turnover and/or instability of staff next year? <u>District administrator</u> • What have been the district's experiences in attracting/recruiting qualified teachers to work in SIG schools? How, if at all, have these experiences differed between SIG and non-SIG schools and across SIG schools? • Do the SIG schools have discretion in identifying and "letting go" ineffective teachers? Please describe the process.
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of staff recruitment and retention challenges, site visitors responded to the following questions in the online data repository based on all coded data for the principal and district administrator interviews associated with staffing [$Staffing] and staff capacity [!Staff capacity]: • Please describe the extent to which staff recruitment and/or retention is a challenge (includes principal, teachers, coaches, other staff as needed). Why is it a challenge? Please be sure to differentiate between recruitment and retention and indicate the source(s) of evidence. • Please check any of the below that apply to the school's experience with recruiting/retaining teachers, as indicated by the district or principal. o Lengthy commutes for teachers o Poor reputation of school o Stressful school environment due to poor student behavior o Stressful school environment due to administration/staff o Stressful school environment due to safety issues o Open teacher positions at the start of the school year o School compelled to hire teachers previously removed from another school in the district or that were left over in the applicant pool (i.e., among the last) o Teaching staff included Teach for America (TFA) teachers o Other o None of the above Please provide details on the challenges, citing evidence and sources. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Exhibit B.8.
Perceived Teacher Retention and Recruitment Challenges in Core Sample Schools
(continued from previous page)

	Technical Detail
Stage 2: Classification Procedures	Using the principal and district administrator reports in the repository responses, for each challenge, analysts identified whether the explanation was perceived as a teacher recruitment or retention challenge using the criteria described below. Data from other school-level respondents provided details about the types of staff recruitment and retention challenges faced. When the analysis was complete, the lead site visitor for each school reviewed and verified the results of his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Identified as a perceived staff recruitment or retention challenge* • The principal and/or district administrator(s) described this explanation as a staff recruitment or retention challenge.
Caveats	This analysis is not a systematic examination of staffing recruitment and retention challenges, but rather a reflection of the perceptions of district administrators and principals regarding recruitment and retention challenges at their schools.
Notes	Includes 25 core sample schools.

Exhibit B.9.
Types of Support for Staff Recruitment and Retention in Core Sample Schools

Summary	This analysis examines the types of supports for improving staff recruitment and retention in core sample schools in Year 2 of SIG. See Chapter 4 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators and principals*, including the following questions to elicit responses on supports for staff recruitment and retention (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • Are any incentives provided to attract teachers to the SIG schools? If so, are these incentives also offered for other schools in the district? • What is the process for filling open teacher positions in the SIG schools? Is this any different for non-SIG schools? Have there been any changes in the process between the last school year (2010–11) and this school year (2011–12)? Please explain. • What strategies, if any, exist to encourage qualified staff—principals and teachers—to remain at the SIG schools? If any, when were these strategies first implemented? How do they differ from non-SIG school strategies? <u>Principals</u> • What strategies, if any, exist to encourage qualified staff to remain at the school? Are these unique to the school? • Are any incentives provided to attract teachers to the school? If so, please describe. • How, if at all, is the process for filling open teacher positions in the school different from non-SIG schools? Please explain.

Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the types of supports for improving staff recruitment and retention, site visitors responded to the following questions in the online data repository based on all coded data for the principal and district administrator interviews associated with staffing [$Staffing] and staff capacity [!Staff capacity]:
	• For all schools, whether or not teacher retention is a challenge, what actions/strategies have been implemented to improve/promote retention, as indicated by the district or principal?
	  ○ Implement specific actions with the goal to improve teacher satisfaction with job (e.g., honoring teachers, allowing flexibility, improving teacher-only space)
	  ○ Offer incentives for staying
	  ○ Offer advancement/leadership opportunities for teachers
	  ○ Offer supports for teacher commute
	  ○ Other
	  ○ None of the above
	Please provide details on the actions/strategies, citing evidence and sources.

Exhibit B.9.
Types of Support for Staff Recruitment and Retention in Core Sample Schools
(continued from previous page)

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	• For all schools, whether or not teacher recruitment is a challenge, what actions/strategies have been implemented for attracting quality teachers to teach at the school, as indicated by the district or principal? ○ Implement specific actions with the goal to improve school reputation (e.g., staff attending community events to discuss school) ○ Offer incentives for coming ○ Provide SIG schools priority in hiring and selecting teachers ○ Offer supports for teacher commute ○ Widen recruitment efforts to outside of district, to other communities, teaching schools, etc. ○ Other ○ None of the above Please provide details on the actions/strategies, citing evidence and sources. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness. Using the responses to the questions above, analysts identified schools that had particular support to retain and/or recruit their teachers. Coded data from other respondents, such as teachers and coaches, were used for illustrative purposes.
Stage 2: Classification Procedures	Using the principal and district administrator reports identified in the repository responses, for each type of support, analysts identified whether the support was being provided using the criteria described below. When the analysis was complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Identified as a support* • The principal and/or district administrator(s) reported that this support was used to retain and/or recruit teachers.
Caveats	This analysis focuses on whether specific structures and supports to improve teacher recruitment and retention were offered in core sample schools. This analysis is not an examination of the effectiveness of these supports.
Notes	Includes 25 core sample schools.

Exhibit B.10.
Perceptions of the Alignment Between Professional Learning Opportunities and School Goals and Needs in Core Sample Schools

Summary	This analysis examines the extent to which professional learning opportunities were perceived as being aligned with school goals and needs. See Chapter 5 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, teachers, instructional coaches, and external support providers*, including the following questions to elicit responses on the alignment between professional learning opportunities and school goals and needs (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below. External support providers were not explicitly asked questions specific to professional learning.): <u>District administrators</u> • Are there district-level strategies to increase the capacity for leaders in SIG schools? • Thinking about last year and contrasting it with this year, what changes, if any, can be noted with regard to professional learning opportunities for school leaders in SIG schools? • Are there district-level strategies to increase the capacity for teachers in SIG schools? • Thinking about last year and contrasting it with this year, what changes, if any, can be noted with regard to professional learning opportunities for teachers in SIG schools? <u>Principals</u> • What are the primary professional learning opportunities available to teachers? How do these activities fit into the overall strategy for improvement? • Have the professional learning opportunities changed since the last school year? • In your role as principal, have you had any professional learning opportunities this school year? Has this changed since the last school year? <u>Teachers</u> • What are the primary professional learning opportunities in which you and other teachers take part? • To what extent have you been able to use what you learned in the professional learning opportunities in your classroom? What has been the most valuable to you? Why? What has not worked well for you and why? <u>Instructional coaches</u> • Do you have a role in determining the need for professional learning opportunities and/or providing these opportunities to teachers? • Thinking of this school year, are the professional learning opportunities available at this school different from what's offered at other schools? • This school year, what has been particularly strong about the professional learning opportunities offered?

Exhibit B.10.
Perceptions of the Alignment Between Professional Learning Opportunities and School Goals and Needs in Core Sample Schools *(continued from previous page)*

	Technical Detail
Data Sources *(continued from previous page)*	*Focus groups with school improvement teams and teachers,* including the following questions, asked during Year 2 of SIG, to elicit responses on the alignment between professional learning opportunities and school goals and needs (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below. School improvement teams were not explicitly asked questions specific to professional learning.): <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year? • To what extent have you been able to use what you learned in the professional learning opportunities in your classroom? What has been the most valuable to you? Why? What has not worked well for you and why?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the extent to which professional learning opportunities were perceived as being aligned with school goals and needs, site visitors responded to the following questions in the online data repository based on all coded data associated with professional learning [$Professional Learning]: • As described by teachers, the principal, and the instructional coach(es), what were the primary professional learning opportunities in which teachers took part during the 2011–12 school year? Please note which respondent(s) provided evidence and detail any instances of disagreement between respondents. • For the primary professional learning opportunities described above, please describe (a) who was involved with determining the need for the activity/activities, (b) how areas for professional learning were identified, and (c) the rationale for the activity/activities (i.e., compliance with federal, state, or district mandates; addressing identified performance problems; targeted to performance of teachers or students; focused on interests of individual teachers, etc.). Please note which respondent(s) provided evidence and detail any instances of disagreement between respondents. (For this question, respondents refer to the principal, school improvement team, teachers, instructional coach(es), external support provider(s), and district administrator(s).) • Considering the evidence provided by respondents on the rationale for professional learning opportunities, please rate your school based on the extent to which overall professional learning opportunities are "aligned"—that is, the extent to which professional learning opportunities are tied to systemwide and/or school-specific performance goals, plans, and needs. ○ *Aligned.* Schools categorized as having "purposeful" professional learning opportunities are those in which most or all professional learning activities are motivated by outcomes for teachers or students, such as addressing the performance or learning needs of staff members, the performance goals for students, or the improvement plans of the school or district. ○ *Moderately aligned.* Schools categorized as having "moderately purposeful" professional learning opportunities are those in which some, but not most, professional learning opportunities are motivated by the outcomes for teachers or students, such as addressing the performance or learning needs of staff members, the performance goals for students, or the improvement plans of the school or district.

Exhibit B.10.
Perceptions of the Alignment Between Professional Learning Opportunities and School Goals and Needs in Core Sample Schools *(continued from previous page)*

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	○ *Not aligned.* Schools categorized as having "minimally purposeful" or "not purposeful" professional learning opportunities are those in which the set of professional learning activities do not address the learning needs of the staff members as a whole nor do they tie to the performance goals or improvement plans of the school or district. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.
Stage 2: School Classification Procedures	Using the repository responses to the questions above, analysts categorized schools using the classification scheme on the alignment between professional learning opportunities and school goals and needs described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Aligned* • At least one respondent in an administrative or support role (e.g., district administrator, principal, instructional coach, external support provider) and at least two teachers described professional learning opportunities, as a whole, as focused on the goals or needs of the school; AND • Not more than one respondent explicitly described the professional learning opportunities, as a whole, as not focused on the goals or needs of the school. *Moderately aligned* • At least one respondent (but fewer than one administrator and two teachers) described the professional learning opportunities as focused on the goals and needs of the school, AND no respondent explicitly described the professional learning opportunities as not focused on the goals or needs of the school; OR • At least two respondents described professional learning as a mix of opportunities, some that were focused on the goals or needs of the school and some that were not; OR • Respondents disagreed about the extent to which professional learning opportunities, as a whole, are focused on the goals or needs of the school. *Minimally or not aligned* • Not more than one respondent described the professional learning opportunities, on the whole, as focused on the goals or needs of the school, AND at least two respondents explicitly described the professional learning as not focused on the needs of the school. • Not more than one respondent described the professional learning opportunities, on the whole, as focused on the goals or needs of the school, AND no respondent articulated any connections between professional learning opportunities and the goals or needs of the school.
Caveats	This analysis is not an objective examination of the alignment between professional learning opportunities and school goals and needs, but rather is an aggregate reflection of the perceptions of respondents regarding professional learning.
Notes	Includes 25 core sample schools.

Exhibit B.11.
School-Level Structures to Support Teacher Collaboration

Summary	This analysis examines whether core sample schools established structures to support teacher collaboration. See Chapter 5 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals, teachers, instructional coaches, and external support providers,* including the following questions to elicit responses on teacher collaboration (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below. Principals and external support providers were not explicitly asked questions specific to teacher collaboration.): Teachers • At the school, to what extent do teachers have the opportunity to collaborate and work together? Is this different from last year? How? Instructional coaches • To what extent do teachers have the opportunity to collaborate and work together? Is this different from last year? How? *Year 2 focus groups with teachers,* including the following questions to elicit responses on teacher collaboration (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): Teachers • At the school, to what extent do teachers have the opportunity to collaborate and work together? Is this different from last year? How?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine structures to support teacher collaboration, site visitors responded to the following questions in the online data repository based on all coded data associated with collaboration [^Collaboration]: • Please describe the structures related to common planning and collaboration, including a summary of the structures, the respondents who described them, and whether they were funded by SIG. • What was the rationale for this approach to planning or collaboration? Please note the rationale and the respondents. • Please describe whether respondents attributed improved capacity or constrained capacity to the planning or collaboration structures. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Exhibit B.11.
School-Level Structures to Support Teacher Collaboration *(continued from previous page)*

	Technical Detail
Stage 2: Classification Procedures	Using the repository responses to the questions above, analysts identified whether structures were in place to support teacher collaboration using the criteria described below. When the analysis was complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Identified as having structures to support teacher collaboration* • At least one teacher and respondents in at least one other respondent group specifically described one or more of the following: scheduled weekly or monthly time for common planning or study groups, guidelines or protocols for efficient use of collaborative time, or other opportunities for peer-to-peer discussion of instruction or content; AND • Respondents in at least two respondent groups specifically noted that structures to support teacher collaboration were new in Year 1 (2010–11) or Year 2 (2011–12) of SIG, or the SIG budget provided evidence that SIG supported this structure; AND • No respondent explicitly reported that structures to support teacher collaboration had been eliminated or reduced in Years 1 or 2 of SIG.
Notes	Includes 25 core sample schools.

Exhibit B.12.
School-Level Structures to Support Data Use

Summary	This analysis examines whether core sample schools established structures to support data use. See Chapter 5 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals, teachers, instructional coaches, and external support providers,* including the following questions to elicit responses on data use (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>Principals</u> • To what extent have the improvement strategies you are implementing changed during this school year? • How are teachers using student-level data to modify instructional practices? What are the data sources (e.g., student work embedded in the classroom, standardized tests, benchmark assessments, grades, attendance, other)? Why? <u>Teachers</u> • Do you use student-level data in your classroom(s)? How has your use of data changed during the past year, and why? • What are the main ways in which the school is working to accomplish its goals? What specific activities are being implemented? <u>Instructional coaches</u> • Did your role and responsibilities change over the course of the year? If yes, how and why? • Do you use student-level data in your work with teachers? Why or why not? • To what extent have the improvement strategies changed during this school year? <u>External support providers</u> • Do you use school-level and/or student-level data in your work with this school? Why or why not? If so, please explain. *Year 2 focus groups with teachers,* including the following questions to elicit responses on data use (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>Teachers</u> • What are the main ways in which the school is working to accomplish its goals? What specific activities are being implemented? • Over the course of this school year, did you receive support from others? Did you work with a coach? With the external support provider?

Exhibit B.12.
School-Level Structures to Support Data Use *(continued from previous page)*

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine structures to support data use, site visitors responded to the following questions in the online data repository based on all coded data associated with collaboration [$Data Use]: • Please describe the structures related to data use, including a summary of the structures, the respondents who described them, and whether they were funded by SIG. • What was the rationale for these data collection or management structures? Please note the rationale and the respondents. • Please describe whether respondents attributed improved capacity or constrained capacity to the data use structures. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.
Stage 2: Classification Procedures	Using the repository responses to the questions above, analysts identified whether structures were in place to support data use using the criteria described below. When the analysis was complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Identified as having structures to support data use* • Respondents in at least two respondent groups specifically described one or more of the following: access to diagnostic or benchmark assessments, an online data management system and early warning system, or external supports for data analysis; AND • Respondents in at least two respondent groups specifically noted that structures to support data use were new in Year 1 (2010–11) or Year 2 (2011–12) of SIG, or the SIG budget provided evidence that SIG supported this structure; AND • No respondent explicitly reported that structures to support data use had been eliminated or reduced in Years 1 or 2 of SIG.
Notes	Includes 25 core sample schools.

Exhibit B.13.
District Support Services to Build Human Capital in Core Sample Schools

Summary	This analysis examines the types of support services to improve human capital received from districts in core sample schools. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, and teachers*, including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • How did the district support the SIG schools this year? How was this different from the last school year? Why? • Are there particular ways in which the district has built its own capacity to support SIG implementation this year? • Are there any district-level strategies to increase the capacity for leaders in SIG schools? • Are there any district-level strategies to increase the capacity for teachers in SIG schools? <u>Principals</u> • During this school year, did the district provide you with guidance or input into the appropriate school improvement strategies? • What is the process for filling open teacher positions or removing ineffective teachers from the school? Is that different from the process in other district schools? What is the district role? <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year? • Have the professional learning opportunities available to you this school year changed from what was available last year? If so, how? • Over the course of this school year, did you receive support from others? Did you work with the coach? With the external provider? Please describe. • Do you have sufficient support to integrate the use of data in your classroom? Why or why not? If yes, please describe how you are supported. *Year 2 focus groups with teachers*, conducted during Year 2 of SIG, including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year? • Have the professional learning opportunities available to you this school year changed from what was available last year? If so, how? • Over the course of this school year, did you receive support from others? Did you work with the coach? With the external provider? Please describe. • Do you have sufficient support to integrate the use of data in your classroom? Why or why not? If yes, please describe how you are supported.

Exhibit B.13.
District Support Services to Build Human Capital in Core Sample Schools
(continued from previous page)

	Technical Detail

Stage 1: Identifying District Supports	Based on a review of the literature on the district role in building school capacity, the study team identified the following support services, which were categorized into four broad categories or domains—interpreting and using data; teacher staffing policies (recruitment and retention); teacher professional learning; and building school leadership capacity:
	• **Interpreting and using data**
	  ○ Benchmark assessments
	  ○ Supplying data to school site
	  ○ Providing data analysis tools
	• **Teacher staffing policies (recruitment and retention)**
	  ○ Supportive teacher staffing policies
	• **Teacher professional learning**
	  ○ District-led teacher professional learning
	  ○ District-supported instructional coaches
	• **Building school leadership capacity**
	  ○ Providing leadership coaching or other district-level professional learning support for school principals
	  ○ Establishing systems that allow principals to problem solve and collaborate towards shared objectives

Stage 2: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the types of support services that core sample schools received from their district, site visitors responded to the following question in the online data repository based on all coded data associated with district support and the district policy environment [SS_District, C_Policy Environment]: • Please describe the district's general approach to supporting capacity-building in low-performing schools. If possible, please explain the district's rationale or theory of action underlying this approach. In addition, for each category of support services, site visitors were asked to identify respondent groups that reported receiving a particular support from the district, as well as to provide additional details on the support, including the nature and focus of the support; duration and frequency with which the support was provided; the scope of the support (e.g., SIG schools only, targeted to schools on some other basis, offered districtwide); rationale for providing the support; the extent to which the support aligned with district- and school-level priorities and goals; source of funding (e.g., SIG, other source); and the extent to which contextual factors (e.g., teacher's union, community relations, other district policies) facilitated or detracted from the district's ability to build capacity through the support. Questions for supports related to interpreting and using data are provided below as an example of the repository questions on district support services to build human capital: • For each support service associated with interpreting and using data, please identify whether the following respondents identified this support as being offered by the district (check as many as apply). [SS_District, $Data Use, $Evaluation, SC_Monitoring Change, SC_Alignment of Practices]

Exhibit B.13.
District Support Services to Build Human Capital in Core Sample Schools
(continued from previous page)

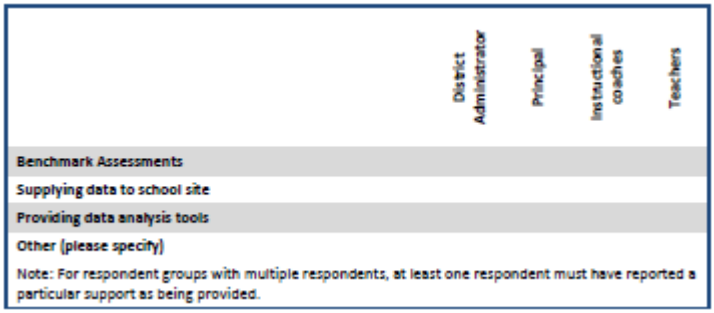
	Technical Detail
Stage 2: Qualitative Data Analysis Procedures *(continued from previous page)*	 • Please use the space below to describe the supports that are being provided. Include the following types of information in your description and please document your data sources: brief description of support (nature and focus of the support, frequency with which the support is provided, rationale for providing the support); source of funding (SIG/Other); duration of support (pre-SIG, SIG); whether support is only for SIG schools, or whether it is offered district wide, or targeted to schools on some other basis (e.g., to schools with a particular accountability status); whether support aligns with perceptions of district priorities/goals; whether support aligns with perceptions of school-level priorities/goals; whether there are contextual factors (union role, community relations, other district policies) that facilitate or detract from the district's ability to successfully build capacity using this activity. [SS_District, $Data Use, $Evaluation, SC_Monitoring Change, SC_Alignment of Practices] Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.
Stage 3: Classification Procedures	Using the repository responses to the questions above, for each category of district support, analysts identified whether the support was being provided using the criteria described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refers to individuals from the following respondent groups: teachers, instructional coaches, other school leaders (e.g., school leadership team members, assistant principals), and parents. *Identified as a type of support* • The principal and/or a district administrator and a respondent from at least one additional respondent group identified one or more specific support service as being supplied by the district. For district supports related to teacher staffing and building school leadership capacity, the threshold was lowered to reports from the principal and/or a district administrator only, as these respondents were in the best position to describe these types of supports.
Caveats	These analyses cannot determine the district's rationale behind offering certain types of services to SIG schools over others. Here, we focus on categorizing the types of services that district and school stakeholders reported either providing or receiving.
Notes	Includes 22 of 25 core sample schools. Three schools implementing the restart model were excluded from this analysis because they are managed by either EMOs or CMOs that have been designated as external partners (as opposed to districts) for the purposes of our analyses.

Exhibit B.14.
District Organizational Structures to Build Human Capital in Core Sample Schools

Summary	This analysis examines whether districts established organizational structures to support building human capital at core sample schools. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, instructional coaches, and teachers,* including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • How did the district support the SIG schools this year? How was this different from the last school year? Why? • Are there particular ways in which the district has built its own capacity to support SIG implementation this year? • Are there any district-level strategies to increase the capacity for leaders in SIG schools? • Are there any district-level strategies to increase the capacity for teachers in SIG schools? <u>Principals</u> • During this school year, did the district provide you with guidance or input into the appropriate school improvement strategies? • What is the process for filling open teacher positions or removing ineffective teachers from the school? Is that different from the process in other district schools? What is the district role? <u>Instructional coaches</u> • Thinking of this school year, is the professional learning available at this school different from what's offered at other schools? How? Why? <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year? • Do you have a sense that the professional learning opportunities available to you at this school this year are different from what's offered at non-SIG schools? What is different? Why? *Year 2 focus groups with school improvement teams and teachers,* including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>School improvement teams</u> • What type of assistance has the school received in its efforts to improve the school? Has this changed since last year? How? Why? <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year? • Do you have a sense that the professional learning opportunities available to you at this school this year are different from what's offered at non-SIG schools? What is different? Why?

Exhibit B.14.
District Organizational Structures to Build Human Capital in Core Sample Schools
(continued from previous page)

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine district-level organizational structures to support school capacity-building, site visitors responded to the following questions in the online data repository based on the coded data (specific codes used are provided in brackets): • Please describe the district's general approach to supporting capacity-building in low-performing schools. If possible, please explain the district's rationale or theory of action underlying this approach. [SS_District, C_Policy Environment] • What, if any, structures does the district have in place to support SIG schools specifically as opposed to its other schools? [SS_District, SIG_Processes, SIG_Funded Activities] Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness. Using the responses to the questions above, analysts identified the following two district organizational structures to build human capital: • *Specific sub-districts to support low-performing schools, such as SIG schools, in the improvement process* • *Specific staff positions (i.e., central office positions or teams) to support low-performing schools, such as SIG schools, in the improvement process*.
Stage 2: Classification Procedures	Using the repository responses to the questions above, for each district organizational structure, analysts identified whether the structure was in place using the criteria described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Identified as a district organizational structure* • A district administrator and a respondent from at least one additional respondent group identified the structure as being in place.
Caveats	While districts may have used other organizational structures to monitor or support schools, these analyses focus specifically on sub-district and SIG administrator structures because these were a) those identified by study participants and b) referenced in the SIG Guidance.
Notes	Includes 13 districts in the core sample.

Exhibit B.15.
Perceived Usefulness of District Supports in Core Sample Schools

Summary	This analysis examines the extent to which respondents perceived the supports (i.e., services, policies, and structures) as useful in building human capital and facilitating overall school improvement. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals, teachers, and instructional coaches,* including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>Principals</u> • During this school year, did the district provide you with guidance or input into the appropriate school improvement strategies? • How does the district measure and monitor your school's success? • What are the primary professional learning opportunities available to teachers? How do these activities fit into the overall strategy for improvement? • In your role as principal, have you had any professional learning opportunities this school year? Has this changed since the last school year? How? Why or why not? • How are teachers using student-level data to modify instructional practices? What are the data sources (e.g., student work embedded in the classroom, standardized tests, benchmark assessments, grades, attendance, other?) • What is the process for filling open teacher positions or removing ineffective teachers from the school? Is that different from the process in other district schools? What is the district role? <u>Teachers</u> • Do you have sufficient support to integrate the use of data in your classroom? Why or why not? If yes, please describe how you are supported. • What are the primary professional learning opportunities in which you and other teachers take part? • To what extent have you been able to use what you learned in the learning activities in your classroom? What has been the most valuable to you? Why? What has not worked well for you and why? <u>Instructional coaches</u> • Did you receive any specific training or acquire a particular certification to be an instructional coach? • Do you use student-level data in your work with teachers? Why or why not? If so, please explain. • Thinking of this school year, are the professional learning opportunities available at this school different from what's offered at other schools? *Year 2 focus groups with school leadership teams and teachers,* including the following questions to elicit responses on the district's role in building school-level human capital (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>School leadership teams</u> • What type of assistance has the school received in its efforts to improve the school? Has this changed since last year? How? Why?

Exhibit B.15.
Perceived Usefulness of District Supports in Core Sample Schools
(continued from previous page)

	Technical Detail
Data Sources *(continued from previous page)*	Teachers • What are the primary professional learning opportunities in which you took part this school year? • To what extent have you been able to use what you learned in the professional learning opportunities in your classroom? What has been the most valuable to you? Why? What has not worked well for you and why?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of how useful their district supports were, site visitors responded to the following questions in the online data repository based on the coded data (specific codes used are provided in brackets): • Please describe the district's general approach to supporting capacity-building in low-performing schools. If possible, please explain the district's rationale or theory of action underlying this approach. [SS_District, C_Policy Environment] • Please describe the relationship between your SIG school and its district. Do the district respondents feel that the district offers strong support to your SIG school? Why/why not? Do school-level respondents agree? Has this relationship changed over time/since SIG, or has it been stable? If there have been changes, to what do respondents attribute those changes? If there is disagreement about the strength of the relationship, why is this the case? Is the district doing anything (actions/strategies/policies) that is interfering with or constraining your school's ability to build capacity? [SS_District, C_District_School History, C_Policy Environment, SC_Perceived Change, SIG_Processes, SC_Monitoring Change, SC_Challenge] • What, if any, structures does the district have in place to support SIG schools specifically as opposed to its other schools? [SS_District, SIG_Processes, SIG_Funded Activities] • Please use the space below to describe the supports that are being provided. Include the following types of information in your description and please document your data sources: brief description of support (nature and focus of the support, frequency with which the support is provided, rationale for providing the support); source of funding (SIG/Other); duration of support (pre-SIG, SIG); whether support is only for SIG schools, or whether it is offered district wide, or targeted to schools on some other basis (e.g., to schools with a particular accountability status); whether support aligns with perceptions of district priorities/goals; whether support aligns with perceptions of school-level priorities/goals; whether there are contextual factors (union role, community relations, other district policies) that facilitate or detract from the district's ability to successfully build capacity using this activity. Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness.

Exhibit B.15.
Perceived Usefulness of District Supports in Core Sample Schools
(continued from previous page)

	Technical Detail
Stage 2: School Classification Procedures	Using the repository responses to the questions above, analysts categorized schools using the classification scheme on perceptions of district support described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. Although the data used in this analysis primarily focused on the perceived usefulness of district support specifically related to building human capital, in some cases, respondents spoke about the usefulness of the district's support as a whole, which may have included other types of support. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Perceived district supports as useful* • The principal and at least one other respondent indicated that district supports were useful to school improvement efforts (For district supports related to teacher staffing or building leadership capacity, the threshold was lowered to reports from the principal only, as the principal was in the best position to describe this type of support.); AND • The principal described district administrators as accessible and helpful when assisting the school to solve problems and overcome challenges to improvement; AND • No more than one respondent described district supports as constraining school improvement. *Mixed perceptions of district supports* • The principal disagreed with at least two other respondents about the usefulness of district supports; OR • The principal and at least one other respondent indicated that certain district supports were useful, while others were not useful. *Perceived district supports as not useful* • The principal and at least one other respondent indicated that district supports were not established, not useful, or were slowing or preventing school improvement efforts; AND • The principal described district administrators as inaccessible or difficult to work with when assisting the school to solve problems and overcome challenges to improvement; AND • No more than one respondent described district supports as useful to school improvement.
Caveats	This analysis is not an objective examination of the effectiveness of the support supplied by districts in facilitating school improvement, but rather an aggregate reflection of respondents' perceptions of the support's usefulness. Because our data limit us from determining whether specific district supports (e.g., instructional coaches) were useful in building human capital, this analysis focuses on respondents' overall perceptions of how useful their district supports were.
Notes	Includes 22 of 25 core sample schools. Three schools implementing the restart model were excluded from this analysis because they are managed by either EMOs or CMOs that have been designated as external partners (as opposed to districts) for the purposes of our analyses.

Exhibit B.16.
Areas of External Support Provider Support to Build Human Capital

Summary	This analysis examines the types of support services to improve human capital received from external support providers in core sample schools. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals, teachers, and instructional coaches,* including the following questions to elicit responses on the external support providers' role in building school-level human capital (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • Are there particular ways in which the district has built its own capacity to support SIG implementation this year? Please describe. Is this different from last year? How? Why? ○ Has the district worked with an external partner? If so, describe the partner's role and if it is different from the prior year. <u>Principals</u> • What are the primary professional learning opportunities available to teachers? How do these activities fit into the overall strategy for improvement? • In your role as principal, have you had any professional learning opportunities this school year? Has this changed since the last school year? How? Why or why not? • How are teachers using student-level data to modify instructional practices? What are the data sources (e.g., student work embedded in the classroom, standardized tests, benchmark assessments, grades, attendance, other?) <u>Teachers</u> • What are the primary professional learning opportunities in which you and other teachers take part? • Have the professional learning opportunities available to you this school year changed from what was available last year? If so, how? <u>Instructional coaches</u> • Thinking of this school year, are the professional learning opportunities available at this school different from what's offered at other schools? How? Why? *Year 2 focus groups with school improvement teams and teachers,* including the following questions to elicit responses on the external support providers' role in building school-level human capital (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>School improvement teams</u> • What type of assistance has the school received in its efforts to improve the school? Has this changed since last year? How? Why? <u>Teachers</u> • What are the primary professional learning opportunities in which you took part this school year?

Exhibit B.16.
Areas of External Support Provider Support to Build Human Capital
(continued from previous page)

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the types of supports that core sample schools received from external support providers, analysts reviewed all coded data from district administrators, principals, teachers, school improvement team members, and instructional coaches associated with external providers [SS_External Provider]. They then responded to the following questions in the online data repository based on the relevant coded data: • What expertise is the external provider supposed to bring to the school? • How is the external support intended to build capacity of the school? • If the school works with an external partner, please describe the role of the provider, the focus of the support, and the relationship with stakeholders. Using these data, analysts identified the following areas of support considered to build the capacity of school leaders and staff: • **Budget planning,** including professional learning for the principal and/or school improvement team on how to spend SIG funds. • **Coaching,** including professional learning for instructional coaches. • **Community involvement,** including professional learning for the community liaison. • **Curriculum and instruction,** such as professional learning on particular content areas (e.g., reading, mathematics), Common Core, and English language learners. • **Data use,** such as professional learning on the use of data in planning instruction. • **School culture and climate,** such as professional learning for teachers on strategies to improve student behavior. • **School leadership,** including professional learning for the principal on topics such as SIG and curriculum and instruction; other teacher/staff leadership development; and developing governance structures. • **Staff collaboration,** including professional learning on designing school-level collaboration structures. • **Strategic planning,** including professional learning on developing the school vision, goals, and theory of action, and on identifying school challenges. • **Staffing,** such as assistance in teacher evaluation and in the teacher hiring and terminating processes. Activities such as evaluation support (if no professional learning element); support on vendor tools; assistance with school accreditation; assistance in developing financial incentives; monitoring; supports for tutoring, afterschool, and summer school programs; and assistance with teacher union negotiations were not considered to be human capital-building efforts and thus were excluded from the analysis.

Exhibit B.16.
Areas of External Support Provider Support to Build Human Capital
(continued from previous page)

	Technical Detail
Stage 2: Classification Procedures	Using the coded data, for each type of external provider support, analysts identified whether the support was being provided using the criteria described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Identified as an area of support* • The principal or a school improvement team member, and a respondent from at least one additional respondent group, identified the support as being supplied by the external support provider.
Caveats	These analyses may not capture all external providers who were present in schools with the purpose of building human capital, if respondents failed to mention them or if there was insufficient information on the substantive focus.
Notes	Includes 25 core sample schools.

Exhibit B.17.
Intensity of SIG Partner Supports

Summary	This analysis examines the intensity of supports provided by SIG partners (e.g., external support providers that school leaders considered central to the change process under SIG) among the 13 core sample schools that identified a SIG partner. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals and external support providers*, including the following questions to elicit responses on supports provided by SIG partners (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below. Principals were not explicitly asked questions specific to SIG partners.): <u>External support providers</u> • What are your main responsibilities/roles within this school? To whom are you responsible? Has your role changed during the last year? • Please describe a typical week of work [or visit] to the school this year? Who do you work with, and what are your specific activities? Why? What do you hope to accomplish?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine the intensity of supports provided by SIG partners, analysts reviewed all coded data for the principal and external support provider interviews associated with the external support provider [SS_External Provider].
Stage 2: School Classification Procedures	Using the coded data, analysts categorized schools using the classification scheme on intensity of SIG partner supports described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, "external support provider" refers to the external support provider who served as the school's SIG partner. *Concentrated* • The principal or external support provider reported that the SIG partner provided supports through one-time professional learning activities. *Ongoing* • The principal or external support provider reported that the SIG partner provided supports regularly throughout the year. *Ongoing with additional supports* • The principal or external support provider reported that the SIG partner provided supports that are ongoing with additional supports (i.e., one-time professional learning activities; work in summer; remote supports).
Notes	Includes 17 external support providers in 13 core sample schools that reported having a SIG partner in Year 2 of SIG.

Exhibit B.18.
Perceived Fit Between SIG Partners and Core Sample Schools

Summary	This analysis examines perceptions of the fit between SIG partners (e.g., external support providers that school leaders considered central to the change process under SIG) and core sample schools among the 13 core sample schools that identified a SIG partner. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with principals and external support providers*, including the following questions to elicit responses on the fit between the SIG partner and the school (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below. Principals were not explicitly asked questions specific to SIG partners.): <u>External support providers</u> • What is your expertise? What kind of training have you had? • What is the background or expertise of the organization? What kind of training does your organization provide? • How many schools are you personally currently working with? How many are low performing? • How and when did you come to be the support provider for this school? *Year 2 focus groups with school improvement teams*, including the following questions to elicit responses on the fit between the SIG partner and the school (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>School improvement teams</u> • What type of assistance has the school received in its efforts to improve the school? Has this changed since last year? How? Why? ○ Have you felt that the provider understood your school and its needs?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of the fit between SIG partners and core sample schools, analysts reviewed all coded data for the principal and external support provider interviews and school improvement team focus groups associated with the external support provider [SS_External Provider].

Exhibit B.18.
Perceived Fit Between SIG Partners and Core Sample Schools *(continued from previous page)*

	Technical Detail
Stage 2: School Classification Procedures	Using the coded data, analysts categorized schools using the classification scheme on perceived fit of SIG partners described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, "external support provider" refers to the external support provider who served as the school's SIG partner. *Relevant* • The external support provider and either the principal or a member of the school improvement team described the external support provider as having relevant experience, defined as expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience; AND • No respondent mentioned any specific shortcomings of the external support provider's experience and expertise. *Moderate* • The external support provider and either the principal or a member of the school improvement team described the external support provider as having some relevant experience, but mentioned shortcomings in one of the three areas: expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience. *Low* • The external support provider and either the principal or a member of the school improvement team described the external support provider as not having relevant experience, mentioning shortcomings in at least two of the three areas: expertise working with the particular school or schools with similar characteristics, experience working with teachers or administrators, and prior teaching/administrative experience.
Notes	Includes 17 external support providers in 13 core sample schools that reported having a SIG partner in Year 2 of SIG.

Exhibit B.19.
Perceived Usefulness of SIG Partner Support

Summary	This analysis examines the extent to which respondents perceived the supports provided by SIG partners as useful. See Chapter 6 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 2 interviews with district administrators, principals*, *teachers, instructional coaches, and external support providers,* including the following questions to elicit responses on the role of the SIG partner (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below. Principals, teachers, and instructional coaches were not explicitly asked questions specific to SIG partners.): <u>District administrators</u> • How did the district support SIG schools this year? How was this different from the last year? What is the district's role in identifying external provider(s) for the school(s) and then working with the external provider(s) on school issues? • Are there particular ways in which the district has built its own capacity to support SIG implementation this year? (If the district has an external partner) Describe the partner's role and if it is different from last year. <u>External support providers</u> • What are your main responsibilities/roles within this school? To whom are you responsible? Has your role changed during the last year? • What is your role in the implementation of the key improvement strategies being implemented by the school this school year? *Year 2 focus groups with school improvement teams and teachers*, including the following questions to elicit responses on the role of the SIG partner (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below. Teachers were not explicitly asked questions specific to SIG partners.): <u>School improvement teams</u> • What type of assistance has the school received in its efforts to improve the school? Has this changed since last year? How? Why? ○ Have you felt that the provider understood your school and its needs?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of SIG partner support's usefulness, analysts reviewed all coded data associated with the external support provider [SS_External Provider].

Exhibit B.19.

Perceived Usefulness of SIG Partner Support *(continued from previous page)*

	Technical Detail
Stage 2: Classification Procedures	Using the coded data, analysts categorized schools using the classification scheme on perceptions of SIG partner supports described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. Although the data used in this analysis primarily focused on the usefulness of SIG partner support specifically related to building human capital, in some cases, respondents spoke about the usefulness of the SIG partner's support as a whole, which may have included other types of support. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Perceived SIG partner supports as useful* • At least two respondents described the SIG partner in predominately positive terms; AND • No more than one respondent holds a negative perception of the SIG partner. *Mixed perceptions of SIG partner supports* • Respondents disagreed with one another about the usefulness of supports provided by the SIG partner; OR • Respondents indicated that certain supports provided by the SIG partner were useful, while others were not useful. *Perceived SIG partner supports as not useful* • At least two respondents described the SIG partner in predominantly negative terms; AND • No more than one respondent holds a positive perception of the SIG partner.
Notes	Includes 15 of 17 external support providers in 13 core sample schools that reported having a SIG partner in Year 2 of SIG. Two external support providers were excluded from this analysis due to insufficient data.

Exhibit B.20.
Overall Efforts to Build Human Capital in Core Sample Schools

Summary	This analysis examines the overall level of efforts to build human capital among core sample schools in Year 2 of SIG. See Chapter 7 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 1 interviews with district administrators, principals, teachers, and instructional coaches* *Year 1 focus groups with school improvement teams and teachers* *Year 2 interviews with district administrators, principals, teachers, instructional coaches, and external support providers* *Year 2 focus groups with school improvement teams and teachers* *Year 2 teacher survey data*
Stage 1: Identifying Indicators	From the analyses included in Chapters 3 through 6, the study team identified the following ten indicators to gauge the overall level of efforts to build human capital for each core sample school (Technical approach exhibits associated with the indicators are provided in parentheses. *Mean hours of teacher-reported professional learning* are based solely on teacher survey data and thus do not have a technical approach exhibit.): • Efforts to build structures for distributed leadership (Exhibit B.3) • Replacement of 50 percent of teachers (Exhibit B.4) • Creation of nonteaching staff positions (Exhibit B.6) • Purposeful approach to staffing (Exhibit B.7) • Alignment of professional learning with school goals and needs (Exhibit B.10) • Mean hours of teacher-reported professional learning • Efforts to build structures to support teacher collaboration (Exhibit B.11) • Efforts to build structures to support data use (Exhibit B.12) • Presence of district organizational structures (e.g., sub-districts or designated staff to support SIG schools) (Exhibit B.14) • Presence of SIG partner to support school (Exhibit B.17)

Exhibit B.20.
Overall Efforts to Build Human Capital in Core Sample Schools *(continued from previous page)*

	Technical Detail
Stage 2: Construct Aggregate Index	Schools were categorized on each capacity-building indicator (see referenced technical approach exhibits for classification schemes). For each indicator, analysts ascribed numeric values to the classifications, which were summed to create an aggregate index of capacity-building efforts, with a maximum possible score of 10. Most indicators were scored according to a binary system, with 0 assigned to the negative category (e.g., "no evidence" or "not identified") and 1 to the affirmative category (e.g., "identified"). For example, schools rated as having a "purposeful approach to staffing decisions" were assigned a 1, and schools rated as having "no evidence of a purposeful approach to staffing decisions" were assigned a 0. The only indicators that did not follow this binary system were: • *Mean hours of teacher-reported professional learning.* Although scored according to a binary system, 0 represents below 111 hours and 1, at or above 111 hours [Based on the National Longitudinal Study of *NCLB*, the national estimate of the average number of PD hours for teachers in Title I schools identified for improvement was 111 hours (Taylor et al., 2010)]. • *Creation of nonteaching staff positions.* This indicator was scored using a three-point scale with 0 assigned to schools that added non-instructional staff positions in Year 1 only, 0.5 assigned to schools that added non-instructional staff positions in Year 2 only, and 1 assigned to schools that added non-instructional staff in both years. • *Alignment of professional learning with school goals and needs.* This indicator was scored using a three-point scale with 0 assigned to schools rated as minimally or not aligned, 0.5 assigned to schools rated as moderately aligned, and 1 assigned to schools rated as aligned. When the scores were complete, the lead site visitor for each school reviewed and verified the ratings for his or her school(s).
Caveats	This measure reflects a school's overall reported level of effort to build capacity, not whether a school actually improved capacity. It does not include information about the quality or effectiveness of schools' individual activities to build human capital. In addition, this measure may oversimplify and obscure important aspects of the capacity-building process in some cases. For example, school leaders might reasonably opt to focus on a few leverage points rather than across-the-board efforts. Nevertheless, since SIG prescribes numerous activities for its grantees under each model, we believe that this aggregate perspective provides information on each school's holistic efforts to build human capital that would be lost if we were only to consider each activity in isolation.
Notes	Includes 25 core sample schools.

Exhibit B.21.
Perceptions of Transformational Leadership

Summary	This analysis examines the extent to which principals at core subsample schools were perceived as being characterized by or engaged in transformational leadership in Year 3 of SIG as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with teachers and instructional coaches*, including the following question to elicit responses on principal leadership (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): Teachers • How would you characterize the principal of this school? Instructional coaches • How would you characterize the principal of this school? *Year 3 focus groups with teachers and school improvement teams*, including the following question to elicit responses on principal leadership (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): Teachers • How would you characterize the principal of this school? School improvement teams • (*If the principal was replaced at any point during SIG*) How does the current principal's approach to the school improvement process relate to that of the previous principal? *Year 3 teacher survey data.*
Stage 1: Qualitative Data Analysis Procedures	To examine perceptions of the principals' transformational leadership, analysts reviewed all coded data associated with school leadership [!Staff capacity, !Principal leadership, !Governance, !Other school leadership, !Teacher leadership], as well as portions of transcripts related to the questions identified above. Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). Using these data, analysts identified 19 principal qualities in Year 1, which were then compared against the 21 qualities of effective leadership delineated by Waters et al. (2003) in their meta-analysis of principal leadership studies. This process yielded a set of 11 qualities that were common to both analyses, of which 8 were qualities characteristic of transformational leaders and 3 were qualities uncharacteristic of transformational leaders (Although the labels may differ slightly, analysts determined that the content of the qualities emerging from the case study data was consistent with that in Waters et al. (2003).): Qualities characteristic of transformational leaders • *Accessible/welcomes input*. Easy to approach and communicate with, encourages teachers to contribute ideas. Typically described as having an "open door policy." • *Supportive of staff*. Takes into consideration the needs of the teachers and other administrators. Typically described as "understanding" and "helpful." • *Visible/known to school community*. Has frequent interactions with staff, students, parents, and community. Typically described as a "visible leader." • *Visionary*. Acts as an agent of change and expresses a clear direction for where the school is headed. • *Enthusiastic*. Inspires staff and students and takes on a positive attitude. • *Communicative*. Establishes clear communication systems for teachers, staff, and parents/community members.

Exhibit B.21.
Perceptions of Transformational Leadership *(continued from previous page)*

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	• *Develops leaders*. Gives opportunities to teachers and staff to become leaders and increase their capacity as leaders. • *High expectations*. Establishes high expectations for staff and students. Typically described as "believing in kids and staff." <u>Qualities uncharacteristic of transformational leaders</u> • *Poor communication*. Does not establish clear communication systems for teachers, staff, and parents/community members. • *Unsupportive of staff/bad rapport*. Does not take into consideration the needs of teachers and staff. • *Authoritarian*. Does not ask for teacher and staff input, and makes decisions individually. Typically described as not letting teachers "have a voice."
Stage 2: Teacher Survey Data Analysis Procedures	Analysts incorporated data from the principal-teacher trust scale, which included six items in which teachers were asked about their principal. See Exhibit C.1 for a description of this scale.
Stage 3: School Classification Procedures	Using the coded interview and focus group data, as well as the teacher survey data, analysts categorized principals using the classification scheme on transformational leadership described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *High on continuum* • *Qualitative data:* The principal demonstrated at least three of the eight qualities related to transformational leadership. (Demonstrated qualities refer to those mentioned by at least two respondents); AND • *Survey data*: Principal-teacher trust scale average was at least 0.5 standard deviations (0.37) above the Year 1 scale mean (3.09). *Middle of continuum* • The principal did not demonstrate evidence to be categorized in the high or low end of the continuum. *Low on continuum* • *Qualitative data*: The principal demonstrated none of the eight qualities related to transformational leadership; AND • *Survey data*: Principal-teacher trust scale average was at least 0.5 standard deviations (0.37) below the Year 1 scale mean (3.09).
Caveats	Classifications are based on school staff reports during site visits in Year 3 of SIG and the spring 2013 teacher survey. The analysts were not able to make direct evaluations of the strength of principals' transformational leadership.
Notes	Includes 12 core subsample schools.

Exhibit B.22.
Perceptions of Instructional Leadership

Summary	This analysis examines the extent to which principals at core sample schools were perceived as being characterized by or engaged in instructional leadership in Year 3 of SIG as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with teachers and instructional coaches*, including the following questions to elicit responses on principal leadership (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): Teachers • How would you characterize the principal of this school? Instructional coaches • How would you characterize the principal of this school? *Year 3 focus groups with teachers and school improvement teams*, including the following questions to elicit responses on principal leadership (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): Teachers • How would you characterize the principal of this school? School improvement teams • (*If the principal was replaced at any point during SIG*) How does the current principal's approach to the school improvement process relate to that of the previous principal? *Year 3 Teacher survey data.*
Stage 1: Qualitative Data Analysis Procedures	To examine perceptions of principals' instructional leadership, analysts reviewed all coded data associated with school leadership [!Staff capacity, !Principal leadership, !Governance, !Other school leadership, !Teacher leadership], as well as portions of transcripts related to the questions identified above. Using these data, analysts identified data on activities associated with instructional leadership of the principal (e.g., principals who focused on academics and the academic achievement of students, and who were in the classroom providing feedback on instruction and/or curriculum), noting how many and which types of respondents provided data. Examples of quotations defining the instructional leadership quality include the following: • "[The principal] knows what kids need at each grade level. If I have a question, I can reliably trust [that the principal] will have a reasonable suggestion. He knows instruction at different grade levels." (*instructional coach*) • "The principal and the assistant principal are a godsend… [The principal] made it so that [our school] has a real viable curriculum and we have some people committed to rigor, and that's something this school has needed dramatically..." *(external support provider)*
Stage 2: Teacher Survey Data Analysis Procedures	Analysts incorporated data from the instructional leadership scale, which included seven items in which teachers were asked about various attributes of their principal's instructional leadership. See Exhibit C.1 for a description of this scale.

Exhibit B.22.
Perceptions of Instructional Leadership *(continued from previous page)*

	Technical Detail
Stage 3: School Classification Procedures	Using the coded interview and focus group data and the teacher survey, analysts categorized principals using the classification scheme on instructional leadership described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *High on continuum* • *Qualitative data:* At least two school-level respondents described principal activities associated with instructional leadership; AND • *Survey data:* Instructional leadership scale average was at least 0.5 standard deviations (0.33) above the Year 1 scale mean (3.12). *Middle of continuum* • The principal did not demonstrate evidence to be categorized in the high or low end of the continuum. *Low on continuum* • *Qualitative data:* Fewer than two school-level respondents mentioned principal activities associated with instructional leadership; AND • *Survey data:* Instructional leadership scale average was at least 0.5 standard deviations (0.33) below the Year 1 scale mean (3.12).
Caveats	Classifications are based on school staff reports during site visits in Year 3 of SIG and the spring 2013 teacher survey. The analysts were not able to make direct evaluations of principals' strength as instructional leaders.
Notes	Includes 12 core subsample schools.

Exhibit B.23.
Perceptions of Strategic Leadership: Theories of Action as Reported by Principals

Summary	This analysis examines the extent to which principals at core subsample schools demonstrated a theory of action in Year 3 of SIG as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with principals*, including the following questions, to elicit responses on the theory of action (Note that information regarding the theory of action may also have been obtained through other points in the interview, not just in direct response to the questions listed below. Data on the rationale for selecting particular improvement actions, intended outcomes of the improvement actions, and underlying assumptions were generally prompted from the questions below.): <u>Defining the performance problem</u> • What are the key challenges your school is currently facing in your efforts to improve student performance? • Have the challenges faced by the school in improving student performance changed over past the three years? If so, how and why? • On previous visits to your school, we heard about performance challenges related to [list of challenge areas]. Is this still a challenge? If not, how was that challenge overcome? • What is your understanding of why this school continues to be low-performing? <u>Identifying improvement actions to address the performance problem</u> • We want to ask about your approach to making improvements in your school. On previous visits, we've talked about a variety of activities your school has implemented to address performance challenges. Today, I want to hear about the key improvement actions or strategies for moving the school forward that you have prioritized this year. What are they? Why have you been focusing on these? How do the activities relate to the challenges we just discussed? • Over the three years of SIG implementation, have the school's key improvement actions or strategies changed? If so, how and why? • Generally speaking, what do you think your school needs to improve student performance (e.g., funding, expertise, staff capacity)? Beyond these steps you're already taking, what do you think the school needs to [improve/continue to improve] student performance and why?
Stage 1: Defining the Concept	A theory of action, broadly stated, is the implicit or explicit set of operational assumptions regarding how the change process will unfold in a given school. To operationalize a principal's "theory of action," the study team identified five elements of a theory of action: (1) defining the performance problem, (2) identifying a set of improvement actions or primary levers of change to address the performance problem, (3) providing a rationale for selecting those improvement actions, (4) identifying the intended outcomes of those strategies, and (5) explaining the explicit and interrelated assumptions underlying the change process in a school.

Exhibit B.23.
Perceptions of Strategic Leadership: Theories of Action as Reported by Principals
(continued from previous page)

	Technical Detail
Stage 2: Qualitative Data Analysis Procedures	Using this five-element framework, analysts coded the full principal interview transcripts from fall 2012 and spring 2013 to capture whether each of these five elements of a theory of action were present in the principal's interviews. This process enabled analysts to examine the degree to which principal responses to certain key questions tied together, built on one another, and generally aligned with what the principal stated throughout the course of the interview, and thereby, allowing the analysts to obtain a comprehensive understanding of if and how principals articulated the five components of their theories of action. Using the coded principal interviews, analysts summarized the data to produce a narrative for each principal's theory of action. When synthesizing the elements of a principal's theory of action, they considered all five elements of the theories of action—performance problem, actions and primary levers of change, intended outcomes, rationale, and assumptions. This narrative included statements such as the following: • "The principal described his long-term vision of the school as moving up on the district's measure of school performance: 'We hope to become an 'achieving' school.' Overall, the principal expressed a limited view of the challenges at the school (low test scores), but was strategic about ways to boost academic performance (targeted credit recovery, test preparation, focused professional development). However, based on the data it appears that all of the changes made throughout Year 3 were primarily driven by the desire to improve…performance in math and ELA (as well as to improve graduation rates, [high school exit examination] pass rates, and other district measures of 'school success')...not to enact fundamental change in the way the school operates. The principal did mention being interested in creating systems and structures that would bring about and sustain change without the leadership of a principal, but she didn't delve into the details of what these structures are. Note that the extended day was voted to be discontinued after SIG (despite the principal's desires to continue the work), and professional development would decrease dramatically without SIG funds."
Stage 3: School Classification Procedures	For each element of the theory of action, analysts first determined whether the principal exhibited the element by examining the extent to which the principal could clearly articulate the element. Summary narratives were then used to assess the extent to which the elements mutually reinforced each other, or the coherence of the principal's theory of action. Analysts then classified the core sample schools based on the classification scheme on theories of action described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorization for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *High on continuum* • The principal exhibited at least four of the five elements of a theory of action; AND • The principal demonstrated that these elements mutually reinforce each other. *Mid-High on continuum* • The principal exhibited at least three of the five elements of a theory of action; AND • The principal expressed that some of these elements mutually reinforced one another, but not all of the elements reinforced one another or related to the perceived performance problem.

Exhibit B.23.
Perceptions of Strategic Leadership: Theories of Action as Reported by Principals
(continued from previous page)

	Technical Detail
Stage 3: School Classification Procedures *(continued from previous page)*	*Mid-Low on continuum* • The principal exhibited less than three of the five elements of a theory of action; AND • The principal expressed that most of these elements were externally driven and most of the improvement strategies did not mutually reinforce one another or address the perceived performance problem. *Low on continuum* • The principal exhibited less than three of the five elements of a theory of action; AND • The principal was not able to or did not articulate certain components of the plan.
Caveats	This analysis focuses on principals only and is not a systematic analysis of the theories of action held by all respondents. Thus, the analysis is not intended to represent the theory of action at the school level. Instead, the analysis is meant to provide insight into the theories of action articulated by the principals at 12 core subsample schools. Using principal interviews as the primary source for this analysis, however, presents the following limitations: • Although principals are typically perceived as the leaders of a school, there may be other systems of leadership within a school and respondents outside a school that hold their own theories of action (which may or may not align with the theory of action set forth by the principal). • Principal interviews may not fully represent a principal's theory of action. • Theories of action change over time, so it is likely that the theories of action articulated by the principals in Year 3 of SIG have since shifted. Moreover, because the study team did not ask the principals to explicitly state their theories of action, the data are inferred by answers to relevant interview questions. Additionally, the Year 3 analysis of theories of action as reported by principals differed from the Year 1 analysis in the following ways: • In Year 1, we asked slightly different questions about the perceived performance problem and identifying improvement actions to address the performance problem. We asked questions differently because in Year 3, lead site visitors already had a baseline understanding of the school, so there was no need to repeat the same questions in Year 3. Instead, we asked questions in a way that would build upon our existing understanding at the time of the interview. • In Year 1, we only had one data point: spring 2011 principal interviews. In Year 3, we had two data points: fall 2012 and spring 2013 principal interviews. Thus, in Year 3, we used the interviews from both the fall and the spring.
Notes	Includes 12 core subsample schools.

Exhibit B.24.
Perceptions of Teacher Collaboration

Summary	This analysis examines perceptions of teacher collaboration as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with principals, teachers, and instructional coaches*, including the following questions to elicit responses on teacher collaboration (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): Principals • To what extent do teachers at this school have the opportunity to collaborate and work together? Teachers • What opportunities do you have to collaborate and work together with other teachers at this school? Instructional coaches • To what extent do teachers at this school have the opportunity to collaborate and work together? *Year 3 focus groups with teachers,* including the following questions to elicit responses on teacher collaboration (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): Teachers • What opportunities do you have to collaborate and work together with other teachers at this school? *Year 3 teacher survey data.*
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of teacher collaboration, site visitors responded to the following question in the online data repository based on all coded data associated with collaboration [^Collaboration, SC_Strategies]: • Based on site visit data and the classification instructions below, please classify your school's level of teacher collaboration. The primary data sources for your response should be interviews with principals, teachers, and instructional coaches, as well as focus groups with teachers. Each site visitor reviewed the data in the repository for his or her school(s) to ensure the accuracy of the entries. Using responses to the above repository question, the analysts identified data that reflected the extent to which teachers collaborated at the school, noting how many and which types of respondents provided data. Examples of such evidence include: • "I'm collaborating a lot more, I have someone who's constantly observing my instruction, constantly working with me and challenging me and just giving me another lens to look at my students. I've been observed several times and gotten feedback and I think I'm much more open to people just being here and seeing what's going on." (teacher) • "Some departments haven't wanted to collaborate the way others have. At least, that's what I've seen. Everything has been kind of 'me' and now we are moving towards 'we'—us as a school, what are we going to look at?" (*teacher*) • "One of the things we have done this year is a lot of collaboration. We do a lot of collaborative lesson planning, a lot of collaborative tutoring and making sure that we're up to date on what we're supposed to teach and not just what we're supposed to teach but what our outcomes are supposed to be." *(teacher*)

Exhibit B.24.
Perceptions of Teacher Collaboration *(continued from previous page)*

	Technical Detail
Stage 2: Teacher Survey Data Analysis Procedures	Analysts incorporated data from two teacher survey items that measured teacher collaboration—Likert-scale items asking about the frequency of two collaborative activities: (1) consulting with other teachers about challenges faced in the classroom and (2) sharing lesson plans with other teachers. Because individual survey items are less precise than survey scales, analysts only differentiated schools into two groups: above the survey item mean and below the survey item mean, rather than three groups (0.5 standard deviations below the scale mean or lower, within 0.5 standard deviations of the scale mean, and 0.5 standard deviations above the scale mean or higher), as was done for the survey scales.
Stage 3: School Classification Procedures	Using the repository responses to the question above and the teacher survey data, analysts categorized schools based on the classification scheme on teacher collaboration described below. When the classifications were complete, the lead site visitor for each school was required to review and verify the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Culture of collaboration* • *Qualitative data:* At least one of the following respondent groups—at least two teachers, the principal, or an instructional coach—reported that collaboration time is used for planning lessons, addressing individual student needs, or that time is otherwise described as productive; and at least two teachers described the working environment as collegial (e.g., "[teachers] are a team," "teachers not only work in grade-level teams, but the school staff is like a family—we all work together"); AND • *Survey data:* School means on both teacher collaboration items were above the overall Year 1 sample means (3.63 and 3.46). *Some collaboration* • *Qualitative data*: At least one of the following respondent groups—at least two teachers, the principal, or an instructional coach—reported that (1) there is formal time allotted for collaboration during the school day, but at least one coach or one teacher suggested that the time was not used productively or that it was voluntary and not well-attended; or (2) there is informal collaboration (e.g., teachers sharing lesson plans), but no formal time during the school day that is used for collaboration; AND ONE OF THE FOLLOWING: • *Survey data*: School mean on at least one of the two teacher collaboration items was below the overall Year 1 sample mean (3.63 and 3.46); OR • At least one of the collaboration item means was below the overall Year 1 mean; OR • Qualitative data and teacher survey data did not match (e.g., both survey items were above or below the overall sample means [3.63 and 3.46], but qualitative data indicated "inconsistent collaboration" or a "culture of collaboration").

Exhibit B.24.
Perceptions of Teacher Collaboration *(continued from previous page)*

	Technical Detail
Stage 3: School Classification Procedures *(continued from previous page*	*Inconsistent collaboration* • *Qualitative data*: At least one of the following respondent groups—at least two teachers, the principal, or an instructional coach—reported that, while there is formal time during the school day allocated for collaboration, it is not used consistently for collaboration; OR at least two teachers reported an absence of a culture of collaboration, through the following examples: teachers report feeling isolated, teachers report that leadership is not supportive of collaboration, or teachers are "off in their own rooms doing their own thing"; AND • *Survey data*: School means on both teacher collaboration items were below the overall Year 1 sample means (3.63 and 3.46).
Caveats	The Year 1 analysis of teacher collaboration included a third survey item which asked teachers how often they "discuss what I've learned in professional learning activities with other teachers." This item, however, was removed from subsequent administrations of the teacher survey to accommodate additional items on professional learning, while minimizing the burden on teacher respondents.
Notes	Includes 12 core subsample schools.

Exhibit B.25.
Perceptions of Safety and Orderliness of the School Environment

Summary	This analysis examines perceptions of the safety and orderliness of the core subsample schools as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with district administrators, principals, teachers, and instructional coaches* (No specific questions were asked. Information for this analysis may have been captured at multiple points in the interview.) *Year 3 focus groups with teachers, students, and parents* (No specific questions were asked. Information for this analysis may have been captured at multiple points in the focus group.)
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine respondent perceptions of school safety and orderliness, analysts reviewed all coded data associated with student behavior [^Student behavior] and safety of the school environment [^School safety]. Using these data, analysts identified data on the school environment as reported by respondents, noting how many and which types of respondents provided data.
Stage 2: School Classification Procedures	Using the coded data, analysts categorized schools based on the classification scheme on perceptions of safety and orderliness described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Safe/Orderly* • At least two respondents explicitly described the school as safe or as having none or few behavior problems among students, and no respondents disagreed or made statements to the contrary. *Mixed* • Respondents made contradicting or differing statements about the school's safety and about student behavior. *Unsafe/Disorderly* • At least two respondents described a feeling of being unsafe or behavior problems among students, and no respondents disagreed or made statements to the contrary.
Caveats	These school-level classifications do not include objective, quantitative indicators of student behavior or incidents of crime. They are based only on the reported perceptions of interview and focus group participants.
Notes	Includes 12 core subsample schools.

Exhibit B.26.
Perceptions of the Use of Data for Instructional Decisions

Summary	This analysis examines perceptions of data use to inform instructional decisions in Year 3 of SIG as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with district administrators, principals, teachers, and instructional coaches*, including the following questions to elicit responses on the use of data (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators</u> • For each school, what instructional improvement strategies were planned or implemented this school year? What is the rationale behind these strategies? <u>Principals</u> • Could you describe the specific improvement strategies your school implemented this school year? Have you prioritized these strategies? <u>Teachers</u> • Could you describe some of the specific improvement strategies that you know are, or will be, adopted at your school this school year as part of SIG? <u>Instructional coaches</u> • Could you describe some of the specific improvement strategies that you know are, or will be, adopted at your school this school year as part of SIG? *Year 3 focus groups with teachers*, including the following question to elicit responses on the use of data (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>Teachers</u> • Can you describe some of the specific improvement strategies that were, or will be, adopted at your school this school year?
Stage 1: Qualitative Data Analysis Procedures	To examine the extent to which schools were perceived as using data for instructional decisions, analysts reviewed all coded data associated with how data are being used by school administrators and staff [$Data use]. Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). Using these data, analysts identified data on the frequency and purpose of data use, as reported by respondents, noting how many and which types of respondents provided data. Examples of such evidence include: • "Data drives our instruction, all of our instruction. It determines, in most cases in most classes, which kids are going to intervention during that 8th period [extended day], when they're going, with what frequency, what sort of intensive intervention they need." *(teacher)* • "We are constantly using data. One way we use it well this year is around school culture, shifting…to a system of complete transparency where everything is automated. I share the report with the school every Friday. …teachers know they are not going to get what you want with a kid if they don't have data about it." *(principal)*

Exhibit B.26.
Perceptions of the Use of Data for Instructional Decisions *(continued from previous page)*

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures *(continued from previous page)*	• "I've tried to free up morning time to give them an opportunity to be able to input data and talk about it, but if no one is leading that instruction who understands how to use the data, then it won't be happening properly. We're still finding it a challenge to get all the data generated and use it in a way that can have a positive impact on practice and student learning." *(principal)* • "This year for reading we're focusing on fluency...usually our data suggested we needed to address phonics, however [now] our data suggested that we're moving beyond that, which is wonderful in grades three through five, finally." *(instructional coach)*
Stage 2: School Classification Procedures	Using the coded data, analysts categorized schools based on the classification scheme on perceptions of data use described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to all of the respondent groups listed above. *High data use* • At least three respondents described using data frequently and purposefully, such as to guide instruction (differentiating instruction) or to identify students to pull out of classrooms or for afterschool instruction, or to guide professional learning for teachers; AND • Respondents reported that the school had specific people who took responsibility for data use, such as instructional coaches, data teams, or whole-school processes. *Medium data use* • At least three respondents talked about using data to guide instruction or professional learning for teachers. *Low data use* • Two or fewer respondents discussed reviewing student data; OR • Respondents specifically indicated that the school does not use student data.
Caveats	This is an aggregate reflection of the perceptions of school respondents on whether data are being used to guide instructional practices in the school.
Notes	Includes 12 core subsample schools.

Exhibit B.27.
Perceptions of Locus of Responsibility for Performance Problems

Summary	This analysis examines whether respondents perceived the challenges facing their school in Year 3 of SIG as within their control (i.e., internal) or not (i.e., external), as part of the Year 3 organizational capacity analysis (see Exhibit B.28).
	Technical Detail
Data Sources	*Year 3 interviews with principals and teachers* (No specific questions were asked on the locus of responsibility for performance problems. Information for this analysis may have been captured at multiple points in the interview.) *Year 3 focus groups with teachers* (No specific questions were asked on the locus of responsibility for performance problems. Information for this analysis may have been captured at multiple points in the focus group.)
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To determine whether respondents attributed their schools' performance problems to external versus internal factors, site visitors responded to the following question in the online data repository based on the coded data (specific codes used are provided in brackets): • How did school stakeholders describe the performance problem in their school? That is, to what did they attribute their school's history of low performance? Please document the different data sources that contribute to your response. This should not just be a summary list, but a description of the story that school stakeholders tell about persistent failure. Is there a common, shared perspective or different interpretations? [*Problem definition, *Challenge, C_Behavior, C_Reform history] Once a site visitor completed a school's data repository responses, the site visitor who accompanied him or her to that school reviewed the responses to ensure their accuracy and completeness. Using responses to the question above on the schools' history of low performance, analysts identified data on respondent perceptions regarding responsibility for their school's performance problems.
Stage 2: School Classification Procedures	Using the repository responses to the question above, analysts categorized schools using the classification scheme on responsibility for performance problems described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to at least two teachers or the principal. *Internal responsibility* • Respondents described their performance problems as being within the locus of control of the adults in the school; OR • Respondents described the external context as challenging, but assumed responsibility for the school's history of low performance and did not describe these external challenges as insurmountable; or respondents described the external context in neutral terms, such as "This school is in a neighborhood with high crime." *Limited internal responsibility* • Respondents made statements that attributed the performance problems to the external context, but also described challenges within the locus of control of the adults in the school; OR Respondents attributed the school's history of low performance to a mix of internal and external factors; or respondents (i.e., at least two teachers or the principal) disagreed about the locus of responsibility.

Exhibit B.27.
Perceptions of Locus of Responsibility for Performance Problems
(continued from previous page)

	Technical Detail
Stage 2: School Classification Procedures *(continued from previous page)*	*External responsibility* • Respondents explicitly identified factors external to the school as responsible for the performance problem and did not attribute the history of low performance to any factors internal to the school (e.g., school culture, instruction, leadership, collaboration); or respondents made statements that attributed the performance problems to others outside of the school, such as "Parent participation is why we are failing. That is the foundation."
Caveats	All core subsample schools faced at least some external challenges, whether from the immediate context of the school (e.g., isolation or lack of security), lack of district support, limited financial resources, or high levels of student poverty and associated challenges. Therefore, it would not be surprising for respondents to describe these factors to the site visitors. The distinction for this analysis is whether respondents associated performance problems with the context. In addition, teacher survey data (self-efficacy scale), which were used in the Year 1 analysis of locus of responsibility, were not considered in the Year 3 classifications. These items were removed from subsequent administrations of the teacher survey to accommodate additional items on professional learning, while minimizing the burden on teacher respondents. Because the self-efficacy scale data were consistent with the qualitative data in Year 1 across all core sample schools, we consider the Year 3 classifications to be comparable to the Year 1 classifications.
Notes	Includes 12 core subsample schools.

Exhibit B.28.
Organizational Capacity in Core Subsample Schools

Summary	This analysis examines the overall level of organizational capacity in core subsample schools in Year 3. See Chapter 8 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 3 interviews with district administrators, principals, teachers, and instructional coaches* *Year 3 focus groups with school improvement teams, teachers, parents, and students* *Year 3 teacher survey data*
Stage 1: Identifying indicators	Prior research on school improvement has identified a number of specific variables, or school conditions, often associated with schools with higher-than-expected student achievement, which together may be indicative of an overall level of organizational capacity. The study team identified the following eight indicators to gauge the overall school capacity of each core sample school (see Chapter 1 for a discussion of the study's conceptual framework and indicators of school capacity): • *Leadership*, specifically the extent to which principals exhibit transformational leadership, instructional leadership, and strategic leadership. • *Coherence*, or the degree to which the policies of a school reflect consistent goals; the strategies employed are clearly designed to foster achievement of these goals; and barriers and detractors from the goals and strategies are systematically removed (Honig & Hatch, 2004; Newmann et al., 2001). • *Clear and shared goals*, including a unity of purpose, explicit expectations, and shared values for student learning and success (Newmann et al., 2001; Purkey & Smith, 1983). • *Teacher collaboration*, often described in the literature as either same-subject teachers "identifying a common curriculum, and then analyzing common assessment data to make instructional changes" (DuFour, 2004b) or as teachers of the same students, but of different subjects, working together (Erb & Doda, 1989; Rottier, 2001). • *Teacher-teacher trust,* or the extent to which teachers feel they have mutual respect for each other, for those who lead school improvement efforts, and for those who are experts at their craft (Consortium on Chicago School Research, 2004). • *Safe and orderly climate*, an environment in which students "have a sense of being physically and psychologically safe in their school" (Consortium on Chicago School Research—Student-Centered Learning Climate section, 2004). • *Use of data for instructional decisions*, characterized as the monitoring of student learning and frequent and transparent use of student outcome data to guide instructional decisions (Coburn & Beuschel, 2012; Coburn & Turner, 2012a; Coburn & Turner, 2012b). • *Locus of responsibility*, characterized by the way in which school respondents attributed the performance problem in their school to factors within their control (i.e., internal causes) or outside of their control (i.e., external causes).

Exhibit B.28.
Organizational Capacity in Core Subsample Schools *(continued from previous page)*

	Technical Detail
Stage 2: Indicator Classification Procedures	Schools were first categorized on each leading indicator. Classification schemes related to teacher collaboration, safe and orderly climate, use of data for instructional decisions, and locus of responsibility are presented in Exhibits B.24, B.25, B.26, and B.27. The procedures for the remaining four indicators are as follows: Leadership Analysts combined the three leadership dimensions—transformational leadership, instructional leadership, and strategic leadership (see Exhibits B.21, B.22, and B.23)—to create the following categorizations: • *High level*. The principal was classified as "high or mid-high on continuum" across all three leadership dimensions (transformational, instructional, and strategic). • *Moderate level*. The principal was neither classified as "high or mid-high on continuum" for all three leadership dimensions nor "low or mid-low on continuum" for all three leadership dimensions (transformational, instructional, and strategic). • *Low level*. The principal was classified as "low or mid-low on continuum" across all three leadership dimensions (transformational, instructional, and strategic). Coherence Categorizations for coherence were based on three teacher survey items that measured programmatic coherence—Likert-scale items asking about the level of agreement with the following statements: "Once we start a new program, we follow up to make sure that it's working"; "I worry that we are adopting too many different programs and practices in this school" [reverse-coded prior to creating index]; and "This school generally chooses only those school improvement activities that fit with our improvement goals and strategies." For each item, schools were assigned numeric values based on the school mean relative to the overall Year 1 mean (1 = at least 0.5 standard deviations below the overall Year 1 mean; 2 = within 0.5 standard deviations of the overall Year 1 mean; 3 = at least 0.5 standard deviations above the overall Year 1 mean), which were summed to create a coherence index. • *High level.* Received a summative rating of at least 7 out of 9 on the coherence index. • *Moderate level.* Received a summative rating of 6 out of 9 on the coherence index. • *Low level.* Received a summative rating of less than 6 out of 9 on the coherence index. Clear and shared goals Analysts used the shared goals scale based teacher survey data (see Appendix C for a detailed description of survey scales) to create three classifications, as follows: • *High level.* Shared goals scale average was at least 0.5 standard deviations (0.30) above the Year 1 scale mean (3.18). • *Moderate level*. Shared goals scale average was within 0.5 standard deviations (0.30) of the Year 1 scale mean (3.18). • *Low level*. Shared goals scale average was at least 0.5 standard deviations (0.30) below the Year 1 scale mean (3.18).

Exhibit B.28.
Organizational Capacity in Core Subsample Schools *(continued from previous page)*

	Technical Detail
Stage 2: Indicator Classification Procedures *(continued from previous page)*	Teacher-teacher trust Analysts used the teacher-teacher trust scale based on the teacher survey data (see Appendix C for a detailed description of survey scales) to create three classifications, as follows: • *High level of trust.* Teacher trust scale average was at least 0.5 standard deviations (0.28) above the Year 1 scale mean (2.93). • *Average or moderate level of trust*. Teacher trust scale average was within 0.5 standard deviations (0.28) of the Year 1 scale mean (2.93). • *Low level of trust*. Teacher trust scale average was at least 0.5 standard deviations (0.28) below the Year 1 scale mean (2.93).
Stage 3: School Classification Procedures	For each indicator, analysts assigned numeric values to the classifications (0 for the lowest category, 1 for the middle category, and 2 for the highest category), which were summed to create an aggregate index of school capacity. Analysts then classified the core sample schools based on the Year 1 classification scheme on school capacity described below. In Year 1, because there were no natural breaks in the distribution, cutpoints were set to divide the schools roughly into thirds. When the classifications were complete, the lead site visitor for each school was required to review and verify the categorization for his or her school(s). *Higher capacity* • Received a summative rating of at least 10 out of 16 on the school capacity index. *Moderate capacity* • Received a summative rating of 8 or 9 out of 16 on the school capacity index. *Lower capacity* • Received a summative rating of less than 8 out of 16 on the school capacity index.
Caveats	The Year 1 analysis of teacher collaboration included a third survey item which asked teachers how often they "discuss what I've learned in professional learning activities with other teachers." This item, however, was removed from subsequent administrations of the teacher survey to accommodate additional items on professional learning, while minimizing the burden on teacher respondents. In addition, teacher survey data (self-efficacy scale), which were used in the Year 1 analysis of locus of responsibility, were not considered in the Year 3 classifications. These items were removed from subsequent administrations of the teacher survey to accommodate additional items on professional learning, while minimizing the burden on teacher respondents. Because the self-efficacy scale data were consistent with the qualitative data in Year 1 across all core sample schools, we consider the Year 3 classifications to be comparable to the Year 1 classifications.
Notes	Includes 12 core subsample schools.

Exhibit B.29.
Risk Factors for Sustainability in Core Subsample Schools

Summary	This analysis examines perceived challenges to sustaining and continuing school improvement in core subsample schools. See Chapter 9 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 3 interviews with district administrators, principals, teachers, instructional coaches, and external support providers*, including the following question to elicit responses on threats to sustainability (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): District administrators, principals, teachers, instructional coaches, and external support providers • You mentioned [X] areas in which you've seen improvement at the school. Do you expect that the school will be able to sustain and build upon these improvements post SIG? Why or why not? *Year 3 focus groups with school improvement teams and teachers,* including the following questions to elicit responses on the school's sustainability prospects (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): School improvement teams and teachers • Earlier in our conversation, you mentioned seeing improvement in [areas] at the school. Do you expect that the school will be able to sustain and build upon these improvements post-SIG? Why or why not?
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). Using all coded data associated with sustainability [Sustain_Activities, Sustain_Improvements, Sustain_Steps being taken] and noting how many and which types of respondents provided data, analysts identified four challenges for sustaining and continuing school improvement on which respondents provided perceptions: • Anticipated turnover in school staff • Change in school leadership • Lack of district support, particularly with regard to retaining principals and teachers • Loss of specific interventions (such as professional learning or extended day programs)
Stage 2: Categorization Procedures	Using the coded data, for each challenge, analysts identified whether the explanation was perceived as a threat to sustainability using the criteria described below. When the analysis was complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Identified as a perceived challenge for sustainability* • Respondents from at least three respondent groups described this explanation as a sustainability challenge.
Caveats	This analysis is not a systematic examination of sustainability prospects, but rather an aggregate reflection of the perceptions of respondents regarding their school's prospects for being able to sustain and build upon improvements. Moreover, this analysis does not look at whether any of these occurred or whether improvements were sustained because the study did not collect data post-SIG.
Notes	Includes 12 core subsample schools.

Exhibit B.30.
Perceived Prospects for Sustainability in Core Subsample Schools

Summary	This analysis examines the extent to which respondents in core subsample schools perceived their school's prospects for being able to sustain and build upon improvements. See Chapter 9 for a discussion of the analysis, including analytic results.
	Technical Detail
Data Sources	*Year 3 interviews with district administrators, principals, teachers, instructional coaches, and external support providers*, including the following questions to elicit responses on the school's prospects to sustain improvements (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.): <u>District administrators and principals</u> • You mentioned [X] areas in which you've seen improvement at the school. Do you expect that the school will be able to sustain and build upon these improvements post SIG? Why or why not? • How will the recent years' progress be maintained and built upon? What steps are you taking now to ensure that improvements will be sustained? <u>Teachers, instructional coaches, and external support providers</u> • You mentioned [X] areas in which you've seen improvement at the school. Do you expect that the school will be able to sustain and build upon these improvements post SIG? Why or why not? *Year 3 focus groups with school improvement teams and teachers,* including the following questions to elicit responses on the school's sustainability prospects (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): <u>School improvement teams</u> • Earlier in our conversation, you mentioned seeing improvement in [areas] at the school. Do you expect that the school will be able to sustain and build upon these improvements post-SIG? Why or why not? • How will the recent years' progress be maintained and built upon? What steps or actions is your school's [or the district's] leadership taking now to ensure that improvements will be sustained? • Beyond these steps you're already taking, what do you think the school needs to [improve/continue to improve] student performance? Where do you see this school in five years? <u>Teachers</u> • Earlier in our conversation, you mentioned seeing improvement in [areas] at the school. Do you expect that the school will be able to sustain and build upon these improvements post-SIG? Why or why not? *Year 3 teacher survey data.*

Exhibit B.30.
Perceived Prospects for Sustainability in Core Subsample Schools
(continued from previous page)

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). Using all coded data associated with sustainability [Sustain_Activities, Sustain_Improvements, Sustain_Steps being taken], analysts identified data on respondents' general perceptions regarding sustainability prospects, noting how many and which types of respondents provided data. These data included statements such as the following: • "Well, the sustainability is going to [require that]…you do not have a big turnover happening. If you can keep the folks that you already spent the last two or three years training, implementing the strategies that you need, the culture possibly, it would be part of the culture…here you're always going to have some turnover because of retirement." (*external support provider*) • "I don't think that we're at the point yet where like if they remove me and put me somewhere else and a few other key people [it'll be sustainable]…. We still haven't been able to build that bench." (*principal*) • "…what we've done with the SIG grant has made such a difference so that the biggest fight is to be able to capture or sustain what we can. We're not going to be able to keep the whole thing because we don't have the funds to be able to do that, but at least we can sustain a piece of it." *(district administrator)*
Stage 2: Teacher Survey Data Analysis Procedures	Analysts incorporated data from the school sustainability index scale, which included six items in which teachers were asked the extent to which they agreed or disagreed with statements about the school's future. See Exhibit C.1 in Appendix C for a description of this scale.
Stage 3: School Categorization Procedures	Analysts classified the core subsample schools based on the classification scheme on perceived sustainability described below (Perceived risk factors are those which were identified as a sustainability challenge by respondents in at least three respondent groups). When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. For this analysis, *respondents* refer to individuals from all of the respondent groups listed above. *Perceived as having strong sustainability prospects* • Qualitative data: No respondent mentioned any of the four risk factors to sustaining and continuing school improvement; and no respondent described the school's sustainability prospects in negative terms; AND • Survey data: Sustainability index scale average was at least 0.5 standard deviations (0.26) above the Year 3 scale mean (3.01). *Perceived as having mixed sustainability prospects* • Qualitative data: Respondents from at least three respondent groups reported on at least one of the four risk factors to sustaining and continuing school improvement,[a] but respondents' descriptions of sustainability prospects were mostly positive; AND • Survey data: Sustainability index scale average was within 0.5 standard deviations (0.26) of the scale mean (3.01).

Exhibit B.30.
Perceived Prospects for Sustainability in Core Subsample Schools
(continued from previous page)

	Technical Detail
Stage 3: School Categorization Procedures *(continued from previous page)*	*Perceived as having weak or low sustainability prospects* • Qualitative data: Respondents from at least three respondent groups reported on at least one of the four risk factors to sustaining and continuing school improvement;[a] and respondents' described the school's sustainability prospects in negative terms; AND • Survey data: Sustainability index scale average was below the scale mean (3.01) *[a] While theoretically possible, there were no instances in our data where respondents from only one or two respondent groups reported on one or more of the four risk factors to sustaining and continuing school improvement.*
Caveats	This analysis is not a systematic examination of sustainability prospects, but rather an aggregate reflection of the perceptions of respondents regarding their school's prospects for being able to sustain and build upon improvements. Moreover, this analysis does not look at whether any of these occurred or whether improvements were sustained because the study did not collect data post-SIG.
Notes	Includes 12 core subsample schools.

Exhibit B.31.
Perceptions of Ownership of Reform Efforts

Summary	This analysis examines whether respondents in the core subsample schools perceived the reform efforts being implemented as within their control. See Chapter 9 for a discussion of the analysis, including analytic results.
	Technical Detail

Data Sources	*Year 2 and 3 interviews with district administrators, principals, teachers, and instructional coaches,* including the following questions to elicit responses about ownership of reform efforts (Note that information may also have been obtained through other points in the interview, not just in direct response to the questions listed below.):
	<u>District administrators</u>
	• *Year 2:* Within the district, how do decisions about individual SIG schools get made? Who makes the final decisions about key aspects of the school, such as improvement strategies, staffing, curriculum, professional learning, and budget?
	• *Year 2:* With the school year almost completed, to what extent do you believe the SIG schools are making progress? On what do you base this assessment?
	• *Year 2:* Based on this year's experiences, are you working with the SIG school(s) to refine, refocus, or change any improvement strategies next year? If so, why? How?
	• *Year 3:* If you were to tell the improvement story for each of these schools, what would be the story line for each over the past three years?
	• *Year 3:* Thinking back to where these schools started three years ago, to what extent have/has the school(s) made progress since the beginning of SIG? In what areas? Why? On what do you base this assessment?
	<u>Principals</u>
	• *Year 2:* To what extent have the key improvement strategies changed during this school year? If so, how? Why or why not?
	• *Year 2:* With the school year almost completed, to what extent do you believe this school is making progress? In what areas? On what do you base this assessment?
	• *Year 2:* Based on your experiences are you planning to refine or refocus any of the improvement strategies next year? If so, why? How?
	• *Year 3:* If you were to tell the improvement story of this school over the past three years, what would the story line be?
	• *Year 3:* Thinking back to where your school started three years ago, to what extent has this school made progress since the beginning of SIG? In what areas? Why? How do you know?
	<u>Teachers</u>
	• *Year 2:* Do you believe the ways in which the school is working to accomplish its goals are appropriate given the school's challenges? Why or why not?
	  ○ Do you feel that teachers and students support them? Why or why not?
	  ○ Do you think the school/teachers have the support to implement them well?
	• *Year 2:* With the school year almost completed, to what extent do you believe this school is making progress? In what areas? On what do you base this assessment?
	• *Year 3:* To what extent has this school made progress since the beginning of SIG? In what areas?
	• *Year 3:* How has your work as a teacher at this school changed over the past three years? What caused these changes?

Exhibit B.31.
Perceptions of Ownership of Reform Efforts *(continued from previous page)*

	Technical Detail
Data Sources *(continued from previous page)*	Instructional coaches • *Year 2:* To what extent have the improvement strategies changed during this school year? How? Why or Why not? • *Year 2:* Do you believe these strategies are appropriate given the school's challenges? Why or why not? • *Year 2:* What is your role in implementation of these strategies this school year? • *Year 2:* How is the school monitoring its improvement progress? How do you know if your school is improving? • *Year 3:* To what extent has this school made progress since the beginning of SIG? In what areas? • *Year 3:* How, if at all, do you expect your work as a coach here to change next year? Why? *Year 2 and 3 focus groups with school improvement teams, teachers and parents,* including the following questions to elicit responses about ownership of reform efforts (Note that information may also have been obtained through other points in the focus group, not just in direct response to the questions listed below.): School improvement teams • *Year 2:* To what extent have the improvement strategies changed since last year? If so, how? Why or why not? • *Year 2:* With the school year almost completed, to what extent do you believe this school is making progress? On what do you base this assessment? • *Year 3:* To what extent has this school made progress since the beginning of SIG? In what areas? Teachers • *Year 2:* Do you believe the ways in which the school is working to accomplish its goals are appropriate given the school's challenges? Why or why not? • *Year 2:* How do you learn about different activities taking place or decisions being made at the school? How are teachers kept informed? • *Year 2:* Do you think the school is moving in the right direction? In what areas do you think there has been positive change? Where do you think there has been a lack of change? Why? • *Year 3:* How has your work as teachers at this school changed over the past three years? Why? • *Year 3:* To what extent has this school made progress since the beginning of SIG? In what areas? Parents • *Year 2:* What are your impressions of the improvement activities/changes? How do you think they will help improve some of the school's challenges that we've talked about? • *Year 2:* What do others in the community think about the school and the education it offers? Has that changed in the past year? If so, how? Why? • *Year 3:* Thinking back over the past three years, how has the school changed over time?

Exhibit B.31.
Perceptions of Ownership of Reform Efforts *(continued from previous page)*

	Technical Detail
Stage 1: Qualitative Data Analysis Procedures	Qualitative data were coded by analysts according to the codebook in Appendix A (see Chapter 2 for a description of the coding procedures). To examine whether respondents perceived themselves as having ownership of their school's reform efforts, analysts responded to the following question in the online data repository based on all Year 2 and 3 coded data associated with staff buy-in [^Buy in]: • Did respondents provide evidence that teachers had *ownership* over school reform efforts by the third year of the grant? That is, did Year 2 and Year 3 interview respondents describe teachers as having the capacity to sustain, spread, or deepen reforms, which may be evidenced by teachers contributing ideas, adjusting strategies, taking on new responsibilities, or articulating the rationale for changes? At a school with evidence of ownership, students or parents may also describe having "ownership" over changes.
Stage 2: Classification Procedures	Using the repository responses to the question above, analysts categorized schools using the classification scheme on ownership described below. When the classifications were complete, the lead site visitor for each school reviewed and verified the categorizations for his or her school(s). In cases of disagreement, the analysts and lead site visitor returned to the coded data for the particular school(s) in question to resolve the disagreement. *Evidence of Ownership* • At least one administrator (district administrator, principal, assistant principal) and at least two nonadministrative staff (teacher, instructional coach, parent) described teachers, administrators, or other stakeholder groups as contributing ideas, adjusting improvement strategies, taking on new responsibilities, and/or articulating the rationale for change.
Caveats	This analysis is not based on an objective measure of teacher ownership of reform efforts but rather an aggregate reflection of respondents' perceptions in Year 3 of SIG of whether teachers have the capacity to sustain, spread, and deepen reforms. Moreover, this analysis does not look at the actual sustainability of teacher ownership of reform efforts because the study did not collect data post-SIG.
Notes	Includes 12 core subsample schools.

Appendix C. Details of Teacher Survey Analyses

This appendix provides additional detail on the teacher survey analyses described in Chapter 2, including information on teacher scales used in school classifications and various other analyses.

Teacher Survey Scale Items and Scale Reliability

For the teacher survey scales, we assessed the quality of the scales by conducting a confirmatory factor analysis on the items separately for each scale and by computing the scale reliability (Cronbach's alpha). Exhibit C.1 shows the reliability and contributing items for each scale.

Exhibit C.1.
Teacher Survey Scale Items and Scale Reliability, Spring 2011, 2012, and 2013

	Spring 2011	Spring 2012	Spring 2013
Principal instructional leadership	0.94	0.94	0.95
Carefully tracks students' academic progress			
Understands how children learn			
Makes clear to the staff his or her expectations for meeting instructional goals			
Sets high expectations for student learning			
Actively monitors the quality of teaching in this school			
Presses teachers to implement what they have learned in professional development			
Knows what is going on in my classroom			
Principal-teacher trust	0.94	0.95	0.96
The principal has confidence in the expertise of the teachers			
I trust the principal at his or her word			
The principal takes a personal interest in the professional development of teachers			
The principal looks out for the personal welfare of the teachers			
The principal places the needs of children ahead of personal and political interests			
The principal at this school is an effective manager who makes the school run smoothly			
School commitment	0.79	*n/a*	*n/a*
I usually look forward to each working day at this school			
I wouldn't want to work in any other school			
I would recommend this school to parents seeking a place for their child			
School resources	0.72	0.68	0.65
Large class size and/or case load			
Inadequate or substandard facilities			
Too few textbooks and other instructional materials			
Textbooks and instructional materials that are not aligned with state standards			

Exhibit C.1.
Teacher Survey Scale Items and Scale Reliability, Spring 2011, 2012, and 2013
(continued from previous page)

	Spring 2011	Spring 2012	Spring 2013
Shared goals	0.71	0.79	0.75
At this school, we have a common understanding of the objectives we're trying to achieve with students			
Goals and priorities for this school are clear			
If teachers in this school work hard, we can meet our school's goals for student achievement			
Shared values	0.86	0.86	0.86
Most teachers at this school have values and philosophies of education that are similar to my own			
Most of my colleagues share a focused vision for student learning			
Student behavior	0.76	0.77	0.79
Poor student discipline			
Large number of student transfers into this school or your class at various points during the year			
Low student motivation			
Low and/or erratic student attendance			
Teacher-teacher trust	0.75	0.83	0.81
Teachers in this school are comfortable discussing beliefs about teaching and learning			
Teachers in this school are willing to question one another's views on issues of teaching and learning			
Teachers in this school trust each other			
Sustainability	*n/a*	*n/a*	0.88
I believe that our school will continue to change in positive ways			
School leaders (e.g., principal, department chairs) are committed to continue the efforts to change this school for the better			
Teachers in this school are committed to continue the efforts to change this school for the better			
Our school has the systems in place to sustain the changes we've made			
School leaders (e.g., principals, department chairs) will have the resources (e.g., capacity, support) to continue the efforts to change this school for the better			
Teachers in this school will have the resources (e.g., capacity, support) to continue the efforts to change this school for the better			

Source: SST teacher surveys, spring 2011, 2012, and 2013.
Notes: Includes 25 core sample schools (13 elementary, 12 high) for the spring 2011 and spring 2012 survey, and 12 core subsample schools (5 elementary, 7 high) for the spring 2013 survey.
Numbers of teachers for each year of data collection (spring 2011, spring 2012, spring 2013): principal instructional leadership (*N* = 755, 825, 456); principal-teacher trust (*N* = 744, 799, 443); school commitment (*N* = 765, *n/a* for 2012 and 2013); school resources (*N* = 766, 821, 462); shared goals (*N* = 778, 842, 469); shared values (*N* = 779, 844, 471); student behavior (*N* = 768, 836, 462); teacher-teacher trust (*N* = 771, 835, 463); sustainability (*N* = 339 teachers, *n/a* for 2011 and 2012).
The school resources scale for the spring 2012 and spring 2013 survey did not constitute a reliable scale (alpha = 0.68, 0.65) and was excluded from all analyses.

Classifications Using Survey Data

Many analyses reported in Chapters 3 to 9 were based on classifying schools with respect to features such as their context, reform activities, and practices, several of which relied solely or in part on teacher survey data. These classifications based on the survey data use a relative standard rather than a criterion-based standard—that is, one comparing schools within the sample to each other versus one establishing an absolute threshold that could be used to distinguish schools in any sample. We decided on this approach for three reasons. First, using the survey data as a criterion-based measure would require us to have an objective threshold to distinguish groups of schools, but no such threshold is known for the survey scales used in this study.[48] The schools in the core sample and subsample are not, and were not meant to be, a nationally representative sample of schools, so we could not determine thresholds from our survey data alone. Second, by design, the survey questions were asked in exactly the same way, and in the same order, for all respondents, facilitating valid comparisons among respondents. Finally, we determined that there was enough between-school variance (between 10 percent and 25 percent) on each survey scale to meaningfully distinguish among schools in our sample. Exhibit C.2 presents the survey scales and survey index items used in the school classifications, as well as the relative cut points, using the 0.5 standard deviations above and below the mean criteria. Note that the cut points for all survey scales and survey index items are based on the Year 1 (spring 2011) survey data with the exception of the sustainability scale, which was included in only the spring 2013 teacher survey and administered to the 12 core subsample schools. Because these analyses are focused in part on examining change over time, we used the Year 1 means and standard deviations to determine if schools had progressed on these measures.

Exhibit C.2.
Teacher Survey Data Used in School Classifications

	N of Respondents	Mean	Std. Dev.	Mean − 0.5 Std. Dev.	Mean + 0.5 Std. Dev.
Survey Scales					
Principal Instructional Leadership	690	3.12	0.66	2.79	3.45
Principal-Teacher Trust	688	3.09	0.73	2.73	3.46
Shared Goals	691	3.18	0.60	2.89	3.48
Teacher-Teacher Trust	692	2.93	0.55	2.65	3.20
Sustainability	339	3.02	0.52	2.76	3.28
Survey Index Items					
Programmatic Coherence					
Program follow-up	683	2.72			
Adopting too many programs	687	2.28			
Programs fit with instructional goals	682	2.76			
Teacher Collaboration					
Consult with other teachers about challenges	679	3.63			
Share the content of my lesson plans	681	3.46			

Source: SST teacher survey, spring 2011; SST teacher survey, spring 2013.
Notes: Includes 21 of 25 core sample schools; for the sustainability scale, which was only used in spring 2013, 12 core subsample schools were included. Four schools were excluded for not meeting the 50 percent response rate threshold on the

[48] Although it is possible to determine a seemingly reasonable threshold for classifications (e.g., *3* corresponded to *agree* in most survey items), categorizations would nonetheless be arbitrary (e.g., why not use *2.5*?).

spring 2011 teacher survey.
Survey scales divided schools into three categories: schools whose scale was more than 0.5 standard deviations below the scale mean, schools whose scale was within 0.5 standard deviations of the scale mean, and schools whose scale was more than 0.5 standard deviations above the mean. Survey items used as part of an index for classification were divided into two categories: schools at or above the mean, and schools below the mean.

Classifications Using Survey and Qualitative Data

Three classifications were developed using survey data in conjunction with respondent interview and focus group data: principal leadership, teacher collaboration, and school sustainability prospects. The classification process for these analyses involved several steps. First, schools were classified separately on the basis of survey data (survey scale or survey index based on individual survey items) and on the qualitative data (interviews and focus groups). Then, the survey and qualitative classifications were combined to form final classifications.

When using survey scales to classify schools, we first classified core sample and subsample schools into three categories: schools whose scale score was more than 0.5 standard deviations below the overall scale mean, schools whose scale score was within 0.5 standard deviations of the overall scale mean, and schools whose scale score was more than 0.5 standard deviations above the mean.[49] The following examples illustrate in greater detail the ways in which qualitative and survey data were combined to create school-level classifications.

Given the complex nature of analyzing principal leadership—which consists of the three dimensions of transformational, instructional, and strategic leadership—we used qualitative data as well as survey scale data to create school-level classifications. We first examined interview data for district administrators, principals, teachers, and instructional coaches, as well as focus group data for teachers. Using these qualitative data, we grouped schools into three preliminary categories for the two dimensions of transformational and instructional leadership:

- Schools where the principal was classified as **high on the continuum**
- Schools where the principal was classified as **neither high nor low on the continuum (i.e., moderate)**
- Schools where the principal was classified as **low on the continuum**

We grouped schools into four categories for the third dimension of strategic leadership:

- Schools where the principal was classified as **high on the continuum**
- Schools where the principal was classified as **mid-high on the continuum**
- Schools where the principal was classified as **mid-low on the continuum**
- Schools where the principal was classified as **low on the continuum**

[49] Means and standard deviations were taken from the teacher-level data (rather than school-level averages), since the survey scales, from which this analysis is derived, measure teacher-level attitudes. Although we are ultimately classifying schools, these classifications are based on the average teacher in each school, so that our analysis is essentially comparing the average teacher in each school to the average teacher in our full sample of teachers. A 0.5 standard deviation above and below the mean was set as the threshold as a way to ensure that the 'low' and 'high' classifications were reasonably different from each other. That is, schools that are in the 'low' group have teacher respondents who, on average, responded at least one standard deviation lower than schools in the 'high' group.

Next, we examined the survey data, grouping schools into three categories (low, medium, and high) using the *principal instructional leadership* and *principal-teacher trust* scales for the dimensions of instructional and transformational leadership based on whether each school's scale score was more than 0.5 standard deviations above the overall mean, within 0.5 standard deviations of the mean, or more than 0.5 standard deviations below the mean. The third dimension of principal leadership, *strategic leadership*, did not involve survey data.

Finally, the qualitative data and survey data were combined to determine the three final classifications (see Exhibit C.3):

- Schools where the principal was classified as **high (or mid-high) on the continuum** across all three leadership dimensions (transformational, instructional, and strategic) – final classification is **high**
- Schools where the principal was classified as **low (or mid-low) on the continuum** across all three leadership dimensions – final classification is **low**
- Schools where the principal was classified as **neither high (or mid-high) on the continuum** across all three leadership dimensions **nor low (or mid-low) on the continuum** across all three leadership dimensions – final classification is **medium**

Exhibit C.3.
Leadership Classification Examples Using Qualitative Data and Survey Scales

	Transformational Leadership Qualitative Rating	Transformational Leadership Survey Rating (Y1 mean=3.09)	Instructional Leadership Qualitative Rating	Instructional Leadership Survey Rating (Y1 mean=3.12)	Strategic Leadership Qualitative Rating	Final Classification
Baltimore Bridge Elementary	High	High (3.63)	High	High (3.62)	Mid-high	High
Paul Bunyan High	High	Moderate (3.27)	Moderate	Moderate (3.17)	Mid-low	Medium
McAlliston High	Moderate	Moderate (3.19)	Moderate	Moderate (3.01)	Mid-high	Medium
Coral High	Moderate	Low (2.70)	Moderate	Moderate (2.96)	Mid-low	Medium
Blizzard Bay Elementary	Moderate	Low (2.49)	Moderate	Low (2.78)	Mid-high	Medium
Sawbuck Elementary	Low	Low (2.31)	Low	Low (2.20)	Mid-low	Low

Source: SST respondent interview and focus groups, spring 2013; SST teacher survey, spring 2013.
Notes: This table is for illustrative purposes only; therefore, it contains only 6 of 12 core subsample schools. All school names are pseudonyms.

Paul Bunyan High's qualitative data, for example, suggested a high level of transformational principal leadership. Survey and qualitative data indicated a moderate level of instructional and strategic leadership however, resulting in a final principal leadership classification of medium.

Because individual survey items are less precise than survey scales, we used survey items differently than survey scales. For example, the analysis of teacher collaboration included two survey items,[50] which asked teachers, "How often do you engage in the following activities":

- Consult about challenges: Consult with other teachers about challenges I am facing in the classroom
- Share lesson plans: Share the content of my lesson plans with other teachers

These items were coded from never = 1 to often = 4. Although these items measure aspects of teacher collaboration, they did not constitute a reliable scale in spring 2012 and spring 2013 (alpha = 0.68, 0.65). Thus, we simply classified schools based on whether they were above or below the mean on each.

We also examined interviews with teachers, coaches, and principals, as well as teacher focus groups (for more information, see Exhibit B.24 in Appendix B). Using the qualitative responses in conjunction with the teacher survey data, we created the final three classifications:

- Schools with a **culture of collaboration** had to have a high or some qualitative rating, and both survey items above the mean.
- Schools with **inconsistent collaboration** had to have a low or some qualitative rating, and both survey items below the mean.
- Schools with **some collaboration** had neither a culture or collaboration nor inconsistent collaboration.

For example, Baltimore Bridge Elementary's qualitative data suggested that there is a high level of teacher collaboration at the school (see Exhibit C.4). In addition, teachers in this school reported more frequent collaborative activities than the average core subsample school, according to the two survey items. Therefore, the school was classified as having a culture of collaboration.

Exhibit C.4.
Collaboration Classification Examples Using Qualitative Data and Survey Items

	Qualitative Data Rating	Survey Data: Consult about Challenges (Y1 Mean=3.63)	Survey Data: Share Lesson Plans (Y1 Mean=3.46)	Final Classification
Baltimore Bridge Elementary	High	3.86 (above)	3.63 (above)	Culture of collaboration
McAlliston High	High	3.80 (above)	3.60 (above)	Culture of collaboration
Sawbuck Elementary	Some	3.78 (above)	3.63 (above)	Culture of collaboration
Blizzard Bay Elementary	Some	3.86 (above)	3.41 (below)	Some collaboration
Paul Bunyan High	Some	3.60 (below)	3.47 (above)	Some collaboration
Coral High	Some	3.51 (below)	3.43 (below)	Inconsistent collaboration

Source: SST respondent interview and focus groups, spring 2013; SST teacher survey, spring 2013.
Notes: This table is for illustrative purposes only; therefore, it contains only 6 of 12 core subsample schools. All school names are pseudonyms.

[50] In Year 1, a third item was used to measure teacher collaboration but was not used in subsequent years: teachers were asked how often they "discuss what I've learned in professional development activities with other teachers."

Appendix D. Leading Indicators of School-Level Capacity

Exhibit D.1.
Leading Indicators of School-Level Capacity

Leading Indicator	Definition	Supporting Literature	Measurement in Case Study Schools: Data Sources	Measurement in Case Study Schools: Classifications	Number of Core Sub-sample Schools, Year 1	Number of Core Sub-sample Schools, Year 3
Principal Leadership	Research and policy stress the central role of the principal, especially in leading major change efforts (Edmonds, 1979; Rhim et al., 2007; Whiteside, 2006). This report examines three dimensions of leadership: transformational leadership, instructional leadership, and strategic leadership.	Case studies of successful turnaround schools consistently point to the role of the principal in turnaround efforts (Edmonds, 1979; Herman et al., 2008; Purkey & Smith, 1983). One meta-analysis of 70 studies of principal leadership found a positive correlation between principal leadership (as measured by teacher perceptions) and student achievement (Waters, Marzano, & McNulty, 2003).	**Qualitative data** • Interviews with principals, teachers, and instructional coaches • Focus groups with teachers and school improvement teams **Survey data** • Principal-teacher trust and instructional leadership survey scales	Higher Moderate Lower	2 8 2	3 8 1
Coherence	Programmatic coherence is measured by the degree to which the policies of a school reflect consistent goals, the strategies employed are clearly designed to foster achievement of these goals, and barriers and detractors from the goals and strategies are systematically removed (Honig & Hatch, 2004; Newmann et al., 2001).	Correlational and case studies of schools implementing whole-school reforms found that school staff have difficulty implementing multiple, unrelated interventions (Berends, 2000; Berends, Bodilly, & Kirby, 2002). Furthermore, isolated interventions that are not aligned with other school or district objectives are less likely to achieve desired outcomes than interventions that are closely aligned with existing improvement efforts (Datnow et al., 2006).	**Survey data** • Three teacher survey items	Higher Moderate Lower	2 7 3	4 5 3
Clear and Shared Goals	Schools in which goals are clear and shared among staff are characterized by a unity of purpose, explicit expectations, and shared values for student learning and success (Newmann et al., 2001; Purkey & Smith, 1983).	Studies of schools with higher-than-expected achievement found that establishment of a clearly defined purpose enables a school to "direct its resources and shape its functioning toward the realization of those goals" (Purkey & Smith, 1983) and helps to reduce student alienation (Newmann, 1981).	**Survey data** • Shared goals survey scale	Higher Moderate Lower	2 8 2	2 9 1
Teacher Collaboration	Teacher collaboration is characterized by mutual assistance and support within the school context (O'Day, Goertz, & Floden, 1995). Often described in the literature as either same-subject teachers "identifying a common curriculum, developing common assessments aligned to that curriculum, and then analyzing common assessment data to make instructional changes" (DuFour, 2004b), or as teachers of the same students but of different subjects working together (Erb & Doda, 1989; Rottier, 2001).	Several studies have found a positive correlation between teacher collaboration and student achievement (Goddard, Goddard, & Tschannen-Moran, 2007; Herman et al., 2008). Teacher collaboration and cooperation facilitate improved teacher morale and motivation through the sharing of ideas and practices (Corcoran & Goertz, 1995). This mutual assistance and support, or the "receptivity" of colleagues, plays a role in teachers' daily practice (O'Day, Goertz, & Floden, 1995).	**Qualitative data** • Interviews with principals, teachers, and instructional coaches • Focus groups with teachers **Survey data** Two teacher survey items measuring the frequency (never, rarely, sometimes, often) of collaborative activities	Culture of collaboration Some collaboration Inconsistent collaboration	2 9 1	4 7 1

Exhibit D.1.
Leading Indicators of School-Level Capacity *(continued from previous page)*

Leading Indicator	Definition	Supporting Literature	Measurement in Case Study Schools: Data Sources	Measurement in Case Study Schools: Classifications	Number of Core Sub-sample Schools, Year 1	Number of Core Sub-sample Schools, Year 3
Teacher-Teacher Trust	Teachers' sense of trust is referred to as the extent to which teachers feel they have mutual respect for each other, for those who lead school improvement efforts, and for those who are experts at their craft (Consortium on Chicago School Research, 2004).	Based on correlational analyses of survey data, Sebring and Bryk (2000) found that "in schools that are improving, where trust and cooperative adult efforts are strong, students report that they feel safe, sense that teachers care about them, and experience greater academic challenge. In contrast, in schools with flat or declining test scores, teachers are more likely to state that they do not trust one another" (p. 5).	**Survey data** • Teacher-teacher trust survey scale	Higher Moderate Lower	3 9 0	2 10 0
Safe and Orderly Climate	A safe and orderly climate is an environment in which students "have a sense of being physically and psychologically safe in their school. There are few disruptions due to disciplinary problems, and those that occur are handled firmly and fairly" (Consortium on Chicago School Research—Student-Centered Learning Climate section, 2004).	A safe school environment characterizes schools that have beaten the odds (Bryk et al., 2010; Herman et al., 2008; Johnson & Asera, 1999; U.S. Department of Education, 2010a). "Prevailing research suggests that students' feelings of safety at school, and problems with peer relationships and bullying, are influenced by a broad array of factors, including students' own attributes, attributes of their schools, adults with whom students interact, families, neighborhoods, and the broader society" (Steinberg, Allensworth, & Johnson, 2011).	**Qualitative data** • Interviews with district administrators, principals, teachers, and instructional coaches • Focus groups with teachers, students, and parents	Safe and orderly Mixed Unsafe and disorderly	8 2 2	7 5 0
Use of Data for Instructional Decisions	The use of data for instructional decisions is characterized as the monitoring of student learning, and frequent and transparent use of student outcome data to guide instructional decisions (Coburn & Beuschel, 2012; Coburn & Turner, 2012a; Coburn & Turner, 2012b).	Using data to modify curricular and teaching strategies is a common feature of turnaround schools (Herman et al., 2008). Some studies have found that data can help teachers fine-tune their practices and catch learning problems before they become intractable, in some cases diminishing referrals to special education programs (Marston et al., 2003; McNamara, 1998; Reschly & Starkweather, 1997; Sornson, Frost, & Burns, 2005).	**Qualitative data** • Interviews with district administrators, principals, teachers, and instructional coaches • Teacher focus groups	Higher Moderate Lower	5 4 3	8 4 0
Locus of Responsibility	Locus of responsibility is characterized by the way in which school respondents attribute the performance problem in their school to factors within their control (i.e., internal causes) or outside their control (i.e., external causes).	Reviews of research have found that schools in which teachers exhibit high levels of collective efficacy and take ownership for the challenges facing their schools are more likely to improve student outcomes (Bandura, 1993; Goddard, 2001; Goddard, Hoy, & Hoy, 2000; Goddard, Hoy, & Hoy, 2004).	**Qualitative data** • Interviews with principals and teachers • Focus groups with teachers	Internal Limited internal External	2 8 2	1 10 1