



Shifting From a Plan to a Process: School Improvement Plans in the Cambridge Public Schools

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Shifting from a Plan to a Process:
School Improvement Plans in the Cambridge Public Schools

Doctor of Education Leadership (Ed.L.D.)
Capstone

Submitted by

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To the Harvard Graduate School of Education
in partial fulfillment of the requirements for the degree of
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Dedicated to Ailene and Roger

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Abstract

Although school improvement plans (SIPs) are common in American school systems, they are widely viewed as compliance documents that have little connection to the daily work of improving teaching and learning. In this capstone, I describe and reflect on my experiences as a resident in the Cambridge (MA) Public Schools. My goal was to build district- and school-level systems and structures to shift the role of the SIP away from a document that sits on the shelf and towards a component of an on-going process of improvement.

To achieve this goal, I collaboratively designed SIP templates that focused on shorter-term outcomes and actions, developed a protocol for school teams to reflect on progress towards those shorter-term outcomes, facilitated the collaborative development of district feedback about SIPs, and piloted the Data Wise Improvement Process in two schools to promote the connection between SIPs and daily instruction.

The results of these strategies were generally promising. Most principals and non-teachers (e.g. coaches) reported that this year's SIP process was more likely to improve teaching and learning than last year's process. However, principals were more positive than teachers about the improvements to this year's SIP process, suggesting that the gains in shifting from a plan to a process had not yet reached classroom teachers. This pattern is problematic because it is classroom teachers who must change their practice in order for student learning to improve.

My analysis led me to expand my initial theory of change to include the role of accountability in addition to the focus on support in my original design. My implications for Cambridge and the sector as a whole focus mainly on promoting the development of

“internal accountability,” defined as an agreement about the norms, values, and expectations (Elmore, 2004) between teachers, principals and instructional coaches. In addition, my experience suggests that district leaders should create “external accountability” by holding schools accountable not just for writing the plan, but using it continuously with structured reflections. Finally, this capstone suggests that district leadership teams should also develop internal accountability for engaging in an on-going process of improvement.

Introduction

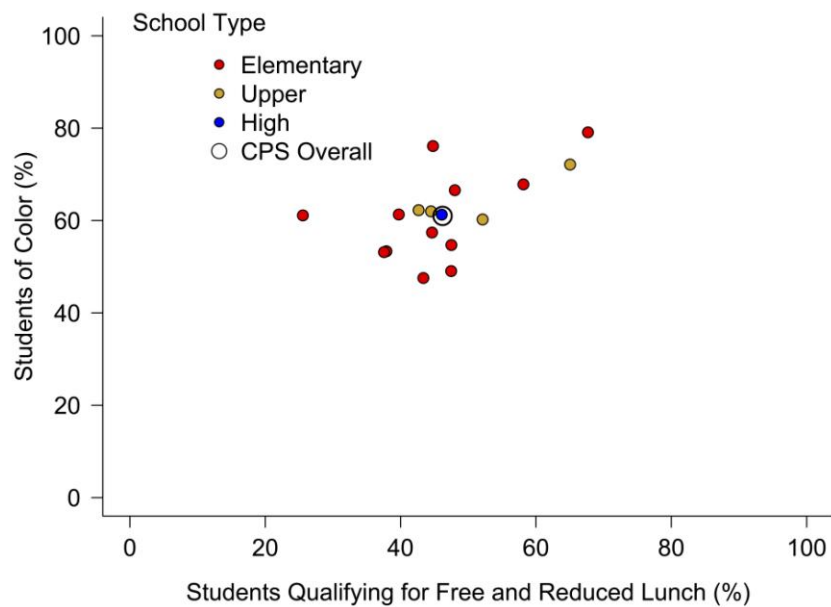
In the 1999-2000 school year, 88.2% of public schools in all states and the District of Columbia had formal school improvement plans (Fernandez, 2011). Over a decade later, however, there is only limited research on the impact of school improvement plans (SIPs). A recent study states, “The prevalence of the SIP... seems to compel the profession to accept it as a best practice. Interestingly, little research has been done as to whether this ‘accepted practice’ actually improves schools” (Dunaway, Kim, & Szad, 2012, p. 164). The research that does exist, however, suggests that SIPs are often considered exercises in compliance and have little impact on improvements in teaching and learning (e.g. Buffett, 2005; Mintrop & MacLellan, 2002; O’Day, 2002). Conversely, research on the impact of on-going improvement processes (as opposed to improvement plans alone) is much more optimistic (e.g. Kaufman, Grimm, & Miller, 2012; Langley, 2009; Talbert, 2011).

Because SIPs are so ubiquitous, if districts could find ways to ensure that SIPs are used in meaningful improvement processes, they could be important drivers of sector-level educational improvement. In this capstone, I describe my efforts in the Cambridge (MA) Public Schools (CPS) to shift from a plan to a process. I find that providing feedback to schools on SIPs, helping schools include short-term goals in their plans, and facilitating a structured process to reflect on those goals can begin to drive an on-going process of improvement. My analysis uncovers the importance of accountability, both “internal” accountability (within schools) and “external” accountability (from outside stakeholders). I conclude with a series of implications for CPS, myself as a leader, and the American education sector as a whole.

Context: The Cambridge Public Schools

CPS is a public school district serving approximately 6,700 students. There are 17 schools in the district, consisting of 12 elementary schools (pre-kindergarten through fifth grade), four upper schools (sixth through eighth grade) and one high school that has three separate programs (a comprehensive high school, a technical arts school, and an extension program). The district as a whole, and the individual schools within it, are ethnically and socioeconomically diverse. Across the district, approximately 46% of students receive free or reduced priced lunch, 61% are students of color, and 20% receive special education services (Cambridge Public Schools, 2014a). The district utilizes a “Controlled Choice” student assignment process that aims to balance schools by socioeconomic status. This process results in schools that are each within about 20 percentage points of the district average in terms of percentages of students of color and students qualifying for free and reduced lunch, as shown in Figure 1.

Figure 1: Cambridge Public Schools Demographic Scatter Plot

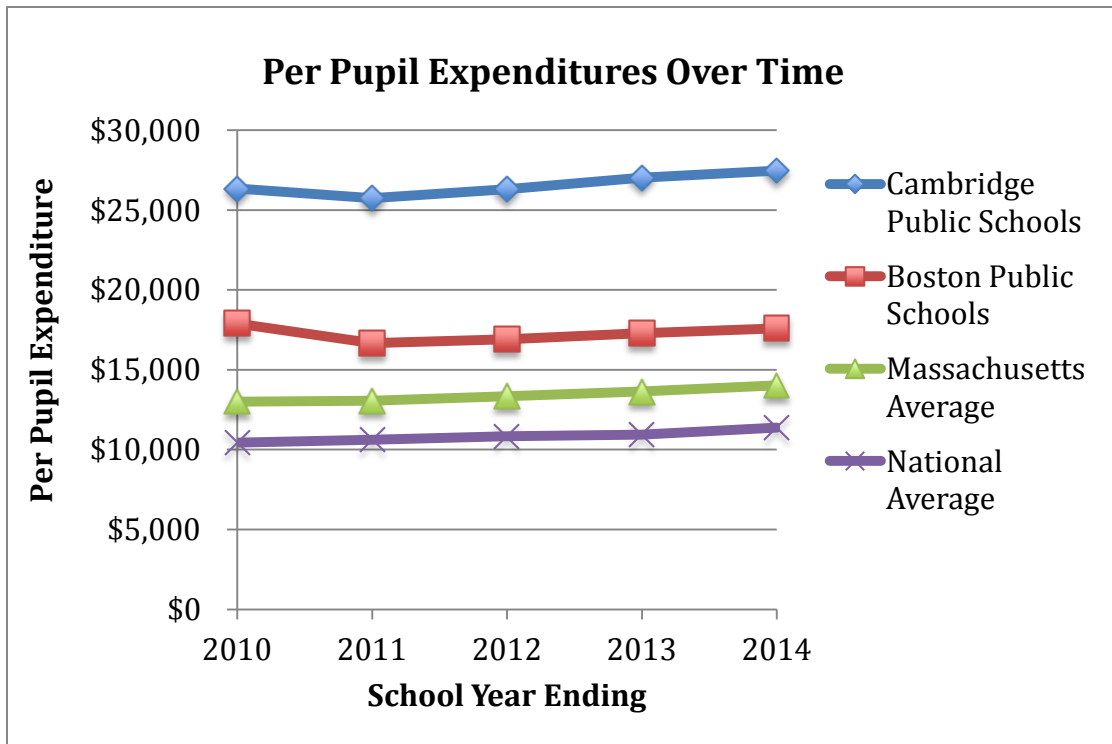


Source: Cambridge Public Schools, 2014a

The public schools are more socioeconomically and ethnically diverse than the city of Cambridge as a whole, which has a population of approximately 105,000 residents, 14.4% of whom live below the poverty line and 33.4% of whom are people of color (“Demographics and Statistics FAQ - CDD - City of Cambridge, Massachusetts,” n.d.).

Cambridge is also home to ten institutions of higher education, including Harvard University and the Massachusetts Institute of Technology. One-sixth of all Cambridge jobs are in higher education and the largest private employers are biotechnology, health care, and high tech firms, including Biogen and Microsoft (Cambridge Chamber of Commerce, n.d.). The large tax base in Cambridge enables per pupil expenditures in Cambridge Public Schools that are approximately double the state average for Massachusetts, which itself is higher than the national average (Figure 2).

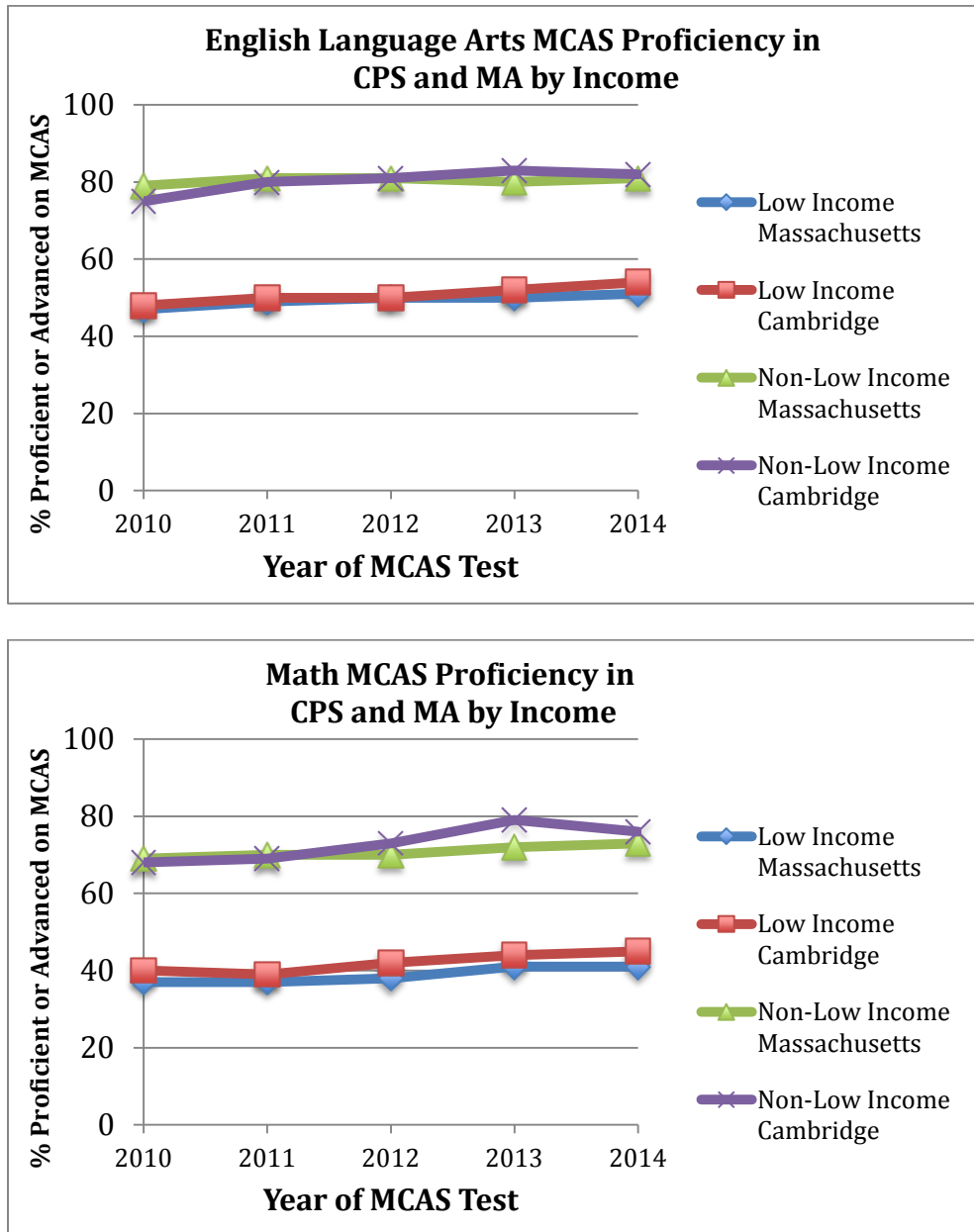
Figure 2: Per Pupil Expenditures Over Time in CPS, MA, and US



Source: “District Analysis and Review Tools (DARTs) - Finance - Cambridge (00490000),” n.d.; National Education Association, 2014

The CPS proficiency rates on the Massachusetts Comprehensive Assessment System (MCAS) reveal substantial achievement gaps between low-income and non-low-income students in all subject areas, and those gaps are similar to those for all students across the state (Figure 3).

Figure 3: MCAS Proficiency Rates in CPS and MA by Income



Source: "District Analysis and Review Tools (DARTs) - Curriculum, Instruction and Assessment - Cambridge (00490000)," n.d.

Similar gaps exist between students with and without disabilities, between students who identify as white or Asian and students who identify as African American/Black, Hispanic or Latino, and between students who are classified as English Language Learners and those who are not (“District Analysis and Review Tools (DARTs) - Curriculum, Instruction and Assessment - Cambridge (00490000),” n.d.). Ensuring educational improvements for every student and closing achievement gaps between all of these groups have been key areas of focus in Cambridge for many years. The current mission of CPS states that “Cambridge Public Schools will be a diverse urban school system that works with families and the community to successfully educate all of its students at high levels” (Cambridge Public Schools, 2014b).

Achieving this mission will likely require balancing a history of school autonomy and choice with newer goals of district-wide coherence and instructional consistency. For decades, CPS encouraged school autonomy to support a “magnet” program in which parents of elementary school students choose from a variety of diverse school programs such as Montessori, language immersion, or project-based learning that were embedded in 12 elementary schools that were all K – 8 (kindergarten through eighth grade).¹ In 2010, however, the Superintendent and his leadership team identified significant inequities in the experiences of students in grades six to eight across Cambridge. After a year-and-a-half process that involved widespread community input, the School Committee adopted the “Innovation Agenda” which created four “Upper Schools” to house all the 6th – 8th graders in the district (except for approximately 80 students that

¹ Although families can choose schools by ranking schools in order of preference, not all families receive their first choice. Among applicants for kindergarten in 2014, the percentage receiving their first choice ranged from 17% to 100%, depending on the school to which they applied (Cambridge Public Schools, n.d.).

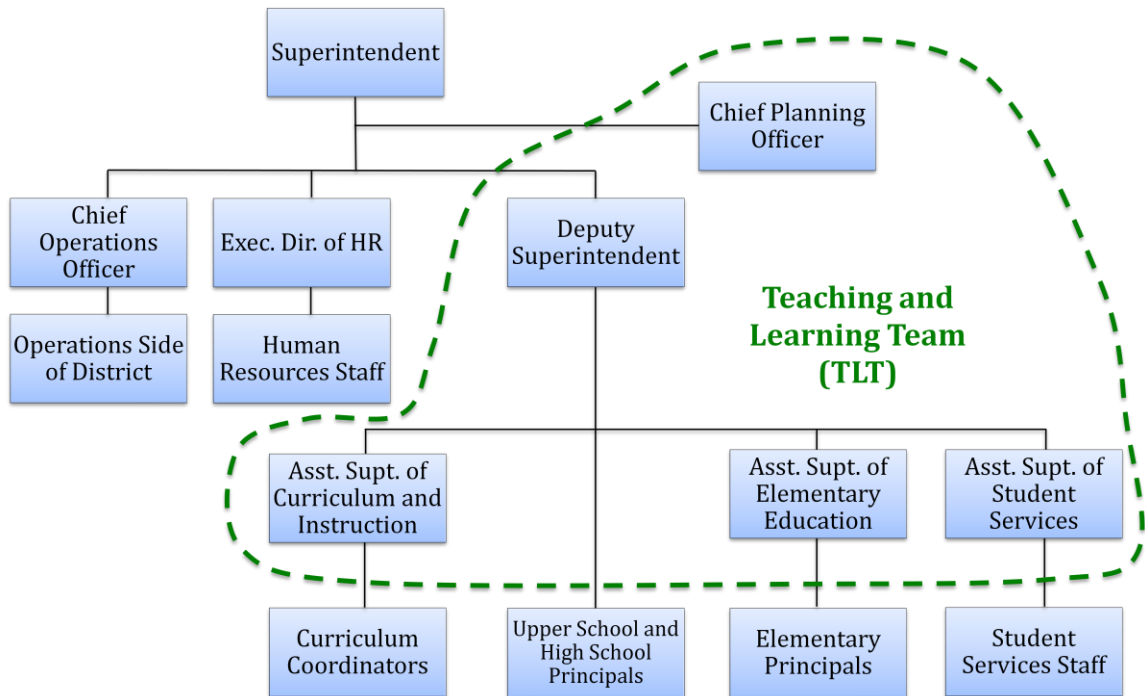
continued to attend one remaining K – 8 school). The vision of the Innovation Agenda Report summarizes the balance needed in CPS: “The success of Cambridge’s controlled choice system requires that our elementary schools offer *unique choice* while providing all students with a *common academically rigorous and socially rich experience*” (emphasis in original, Cambridge Public Schools, 2011, p. 1). Finding the right balance between coherence and autonomy continues to challenge the CPS leadership; this issue emerged in many district leadership team meetings that I attended this year.

The Massachusetts Department of Elementary and Secondary Education (DESE) conducted a “District Review Report” in February 2014 and stated, “Although the planning documents, *Cambridge Public Schools Goals, Objectives and Outcome Measures 2012-2014* and the Innovation Agenda identify goals for educational and program improvement, the district has not developed a long-range, strategic district improvement plan to guide improvement efforts over a three- to five-year period that is annually extended” (Massachusetts Department of Elementary and Secondary Education, 2014, p. 28). The report also noted that the lack of a clear district-wide strategic plan contributes “to a lack of unity and consistency of focus in the goals and objectives articulated in individual school improvement plans” (Massachusetts Department of Elementary and Secondary Education, 2014, p. 41).

The Superintendent of CPS oversees both the operations and instructional sides of the district (Figure 4; see Appendix 1 for the CPS Organizational Chart). The Chief Operations Officer and Executive Director Human Resources manage the operations side, which includes the departments of Finance, Payroll, and Human Resources. The Deputy Superintendent manages the instructional side, which includes the departments of

Curriculum and Instruction, Elementary Education, and Student Services. The leaders of the instructional side of the district together make up the “Teaching and Learning Team” (TLT). Most of my project took place as a member of the TLT (Figure 4).

Figure 4: Abbreviated CPS Organization Chart (see Appendix 1 for complete chart)



The leader of the TLT is the Deputy Superintendent. The Chief Planning Officer is not formally a member of the team, but often attends TLT meetings. Although the current organizational structure officially went into effect in the 2012 – 2013 school year, the positions of Assistant Superintendent of Curriculum and Instruction and Assistant Superintendent of Student Services were not filled until the summer of 2013. Therefore, when I arrived in CPS July 2014, the TLT had only existed with its current members for approximately one year.

My Strategic Project

My strategic project during my residency was to improve district systems and supports for school improvement plans and processes. The TLT began working on improvements to the CPS SIP model in Spring 2014. Anecdotal evidence from principals and district leaders suggested that many SIPs were too long to be useful, were not connected to actual improvements in teaching and learning, and were often seen as exercises in compliance. In the first two months of my residency, I recognized that improving the systems and structures for SIPs was an area where I could take a leadership role in the 2014 – 2015 school year. Therefore, in August 2014, I conducted the following Review of Knowledge for Action focused on SIPs.

Review of Knowledge for Action

To better understand how to design district systems to support school improvement plans, I reviewed evidence from research and practice to answer this question: *How can districts use school improvement plans to improve the quality of teaching and learning in schools?*

My research taught me five major lessons that I used to frame my strategic project and initial theory of action. My Review of Knowledge for Action describes each of these findings and discusses potential lessons for Cambridge:

1. Many stakeholders view SIPs as just exercises in compliance
2. School improvement *plans*, on their own, have no or limited impact on improving the quality of teaching and learning
3. Improvement *processes* (e.g. inquiry cycles) can positively impact learning
4. Schools that are not provided with additional support for implementing improvement processes may be less likely to use those processes to improve teaching and learning.
5. Feedback that reduces discrepancies between current performance and a desired goal can lead to improvements in performance.

Many stakeholders view SIPs as just exercises in compliance

One of the most intensive studies of school improvement plans is a 2005 dissertation by Harvard Graduate School of Education (HGSE) doctoral student Tom Buffett, who examines teachers' and principals' responses to the revisions to the Whole School Improvement Plans (WSIPs) in 6 schools in the Boston Public Schools (BPS). Buffett reports a disconnect in the understanding of the purposes of WSIPs across

different groups of stakeholders in BPS. District-level staff viewed the WSIP as having two primary purposes: 1) to hold teachers and principals accountable and 2) to build teacher and principal capacity through their professional conversations about their WSIP. However, no teachers nor principals viewed the WSIP process as capacity building, but rather as a “symbolic exercise to fulfill external expectations” (Buffett, 2005, p. 158).

A study of a suburban North Carolina district in 2008 reveals similar patterns to those found in Boston (Dunaway et al., 2012). Although the authors do not analyze the perspectives of district administrators, they do find a significant discrepancy in the understandings of purposes between principals and teachers. Specifically, 90% of principals thought the SIP process was valuable and taken seriously, but only 55% of teachers agreed (Dunaway et al., 2012). Likewise, a study of schools in Maryland finds that that teachers and principals lacked a common purpose for SIPs, but rather saw school improvement planning “primarily as a requirement with which one must comply” (Mintrop & MacLellan, 2002, p. 288).

These studies suggest that principals and teachers in Cambridge, like their peers across the country, may also view SIPs as exercises in compliance, rather than meaningfully connected to their ongoing efforts to improve teaching and learning. In order to help principals and teachers shift their mindset away from a compliance orientation and towards a capacity-building orientation, it is critical to solicit their feedback to understand the extent to which 1) they view SIPs as exercises in compliance, and 2) what factors most lead them to this perspective.

School improvement plans, on their own, have no or limited impact on improving the quality of teaching and learning

In his study of the Boston Public Schools in 2003-04, Buffett found that although the district leadership developed many thoughtful revisions to the district's WSIP templates (including many aspects that been integrated in Cambridge), the development of the WSIPs did not lead to improvements in teaching and learning. The first revision to the process was that schools were required to begin the planning process with an analysis of data to select 2 – 4 “priority weaknesses.” However, participants at 5 of the 6 schools studied said that even though they completed the data analysis template, they did not actually use data to develop a school-wide instructional focus. Second, school teams were told to use rubrics to assess their implementation of specific BPS instructional initiatives. Nevertheless, principals reported that they did not systematically use those rubrics to guide their planning. Third, schools were guided through a root cause analysis to identify deeper issues facing their school. These analyses, however, often led to acrimonious conversations in which teachers felt blamed rather than supported. Finally, schools were required to complete an action plan with specific instructional strategies. Yet in reality, most schools used “vaguely worded strategies that allowed considerable room for teachers’ interpretation” (Buffett, 2005, p. 138). Furthermore, in the few cases where principals and teachers did develop specific instructional strategies (such as a multi-step problem solving process in math), those strategies did not appear on the WSIP. Buffett concludes his dissertation by writing, “I leave this study unconvinced that the answer for supporting the development of internal accountability rests in designing more sophisticated planning guidelines... [however,] I (still) believe that planning *can* be

effective way to build internal accountability, but teachers and principals need substantially more support to use it this way” (Buffett, 2005, p. 182).

Two other studies reach similar conclusions to those of Buffett in BPS. In a study of the Chicago Public Schools in the 1990s, O’Day writes that school improvement plans, “More often than not became symbolic exercises in responding to formulaic requirements of the district office rather than thoughtful and inclusive learning experiences for the staff” (O’Day, 2002, p. 311). Mintrop and MacLellan also find limited utility of SIPs in a study of 46 Maryland schools on probation for poor performance in 1998 (Mintrop & MacLellan, 2002). They report that schools often used a “cover all bases approach” with vague statements like “all students can learn,” or “high expectations for our students” (Mintrop & MacLellan, 2002, p. 284).

Kenneth Fernandez conducted a study of schools in the Clark County School District in Nevada, the fifth largest district in the country, in 2005-06 that is more optimistic, though still uncertain, about the potential impact of SIPs (Fernandez, 2011). Fernandez finds that higher quality SIPs (as measured by a series of indicators on a rubric) are weakly correlated with (but do not necessarily cause) increases in student performance in math and reading. He argues that previous studies of SIPs have methodological problems, such as a small sample size. His study, by contrast, examines 303 schools across the district, nearly ten times as many schools as the previously cited studies. Fernandez assesses the quality of SIPs using a rubric that includes 17 indicators, such as comprehensive, specific goals; measurable goals; achievable goals; relevant goals; timely goals; inquiry process; research-based strategies; and more. Fernandez finds a positive relationship between the quality of the SIP and a school’s academic

performance on standardized tests even after controlling for various factors. In particular, the quality dimensions of “monitoring frequency” and “timely goals” have the strongest relationships to measures of school performance. However, Fernandez notes that the effect is “not exceptionally large” (Fernandez, 2011, p. 359). In addition, he points out that because this is not an experimental or quasi-experimental study, he cannot claim that the quality of a SIP *causes* improvement in performance, but rather that SIP quality and improvements in student achievement are *correlated*. In fact, it seems likely that an unmeasured variable, such as the quality of school staff, might cause increases in both the quality of the SIP *and* increases in academic performance without the SIP causing any effect of its own. In this case, although a SIP may document strategic actions that lead to improvements in teaching and learning, completing the SIP itself is not necessarily one of the strategic actions that leads to improvement.

In addition, Reeves (2006) examined the same data set as Fernandez and described another conclusion that is less optimistic about the value of planning documents themselves. One of the 17 indicators used to assess SIPs was “conformity with plan requirements.” Reeves notes that students in schools with SIPs with low conformity with district-imposed plan requirements had a 20.7% higher proficiency rate on assessments of student learning than students in schools whose plans conformed highly to requirements. In other words, Reeves states, “The stunning finding is that the ‘prettiness’ of the plan – conformity to format requirements – is inversely (or should we say perversely?) related to student achievement” (p. 64).

Improvement processes such as inquiry cycles can have a positive impact on learning

A recent book titled *Collaborative School Improvement: Eight Practices for District-School Partnerships to Transform Teaching and Learning* describes the many roles that district leaders can play in supporting school improvement (Kaufman et al., 2012). Notably, the term “school improvement plan” appears on only three pages throughout the book, and even then, it appears only in passing references. Instead, Kaufman et al. assert that improvement *processes* (in the form of inquiry cycles) are more important than the written improvement *plans*. They write that each district should begin their support of school improvement by adopting a specific inquiry cycle. A variety of improvement processes have been described in the literature. For example, the Data Wise Improvement Process (Boudett, City, & Murnane, 2013) guides schools through cycles of eight steps, summarized in Table 1.

Table 1: The Data Wise Improvement Process

<i>Phase</i>	<i>Step</i>	<i>Outcome</i>
Prepare	1. Organize for Collaborative Work.	Group norms, data and assessment inventories.
	2. Build Assessment Literacy.	
Inquire	3. Create a Data Overview	Priority question to guide inquiry
	4. Dig Into Data	Learner centered problem (“students are struggling to...”)
	5. Examine Instruction	Problem of practice (“as teachers, we do not yet...”)
Act	6. Develop an Action Plan	Action Plan
	7. Plan to Assess Progress	Specific short-, medium-, and long-term goals
	8. Act and Assess	Assessment that cycles back to Step 3

Source: (Boudett et al., 2013)

Another improvement process called the Scaffolded Apprenticeship Model (SAM) leads teams through a series of cyclical steps that analyze the impact of an instructional change strategy on a small group of target students (Talbert, 2011).

Many other scholars affirm the impact of inquiry cycles on performance. For example, in her study of school district central office “transformation,” Meredith Honig describes how one high performing district’s staff “from teachers to the central office, engage in evidence-based improvement processes, called ‘cycles of inquiry,’ which challenge them to work from performance data to interrogate and continuously improve their work” (Honig, 2013, p. 7). Similarly, a recent review of effective professional development states that effective learning teams follow “cycles of continuous improvement” (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009).

The concept of improvement cycles is the foundation of a new trend that is sometimes called “improvement science,” which has been defined as deploying “rapid tests of change to guide the development, revision and continued fine-tuning of new tools, processes, work roles and relationships” (Carnegie Foundation for the Advancement of Teaching, n.d.). One form of an improvement cycle is called the Model for Improvement, described by Langley et al. (2009). Their improvement cycle is called a Plan-Do-Study-Act (PDSA) cycle and is consistent with the cycles described by Kaufman et al. in their work with school districts. Langley et al. describe examples of PDSA cycles in fields as diverse as medicine, manufacturing, and public agencies. Their “Model for Improvement” combines the PDSA cycle with these three fundamental questions (Langley, 2009):

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in improvement?

These three questions resemble the results of the principal component analysis of the 17 indicators of SIP quality conducted by Fernandez in Clark County, Nevada (Fernandez,

2011). He finds that his 17 indicators of SIP quality form three relatively independent subsets that he called components: goals, implementation, and assessment. These components can be aligned with questions from Langley (2009), as well the SIP quality indicators of which it consists (Table 2).

Table 2: Comparison of Langley (2009) and Fernandez (2011) Frameworks

<i>Langley (2009) question</i>	<i>Fernandez (2011) component</i>	<i>Fernandez (2011) SIP quality indicators</i>
What are we trying to accomplish?	Goals	Measurable, specific, relevant, and achievable
How will we know that a change is an improvement?	Assessment	Monitoring, Monitoring Frequency, and Evaluation.
What changes can we make that will result in improvement?	Implementation	Professional Development Gaps, Professional Development Focus, and Master Plan

A key element of effective improvement processes is narrowing the focus to clearly defined goals. Kaufman et al. (2012) caution against trying to “boil the ocean,” and suggest focusing on high-priority needs rather than working with myriad initiatives simultaneously. Michael Fullan (2006) describes a board of education outside of Ottawa, Ontario that used to have school improvement plans that were 50 pages thick or more. A reform effort resulted in much shorter, less formal plans that were part of an ongoing improvement process, including monitoring and rapid feedback. Although the relationship is not necessarily causal, student achievement in those schools rose in the 3 years after the reform, compared with stagnant scores beforehand.

Although improvement cycles are relatively common in other fields, such as healthcare and manufacturing, comparatively little is known about the impact of improvement cycles in education (Park, Hironaka, Carver, & Nordstrum, 2013, p. 3). The Carnegie Foundation for the Advancement of Teaching is attempting to fill this void and has named its mission as integrating, “the discipline of improvement science into

education with the goal of building the field's capacity to improve" ("Who We Are - Carnegie Foundation for the Advancement of Teaching," n.d.). While improvement cycles are a key component of their work, the Carnegie Foundation anchors improvement in a deeper analysis of the system as a whole and connects different organizations engaging in improvement cycles through "networked improvement communities." As one example, the Carnegie Foundation formed a network of community college faculty, administrators, researchers, and program designers across 33 institutions to systematically improve the percentage of students passing developmental math through a series of nested improvement cycles. Now in its third year, the network has resulted in 49% of students earning college-level math credit in one year, compared to 6% of students in a traditional curriculum (Sowers & Yamada, 2015).

One important caveat is that although the research on the impact of improvement processes in education is promising, the studies described above are not necessarily representative of the impact of all improvement cycles in education. In fact, some studies demonstrate the challenges associated with using improvement cycles at scale across a school system. For example, Talbert (2011) notes that the SAM inquiry model in New York City initially had a consistent, positive impact on teaching and learning in a relatively small number of schools in 2004 – 2007. However, the expansion of the model to all schools in New York City in 2007 – 2008 led to wide variation in implementation, ranging from schools with a robust use of inquiry cycles to schools that lacked administrator or district support and therefore "only ritually carr[ied] out inquiry in team meetings, if at all" (Talbert, 2011, p. 143).

To summarize, research demonstrates that school improvement *plans*, in and of themselves, are unlikely to produce improvements in teaching and learning. The research is more optimistic, however, about the impact of focused school improvement *processes*, such as cycles of inquiry. Therefore, if we can connect SIPs to focused cyclical improvement processes, they are more likely to be effective. A key element of improvement processes is identifying and reflecting on progress towards specific, short-term goals. Therefore, it is important to add focused, short-term outcomes to the CPS SIPs.

Additional support for improvement processes may be needed

A growing body of research suggests that schools need additional support to implement school improvement processes effectively. For example, Gallimore, Ermeling, Saunders, & Goldenberg (2009) studied the use of an improvement process at nine Title I schools over a five year period. The process consisted of a cycle of “collaborative inquiry,” where teams set explicit goals for student learning, planned instruction to address those goals, and assessed student progress towards those goals. In the first two years of the study, the researchers provided monthly 2-hour trainings to support principals in implementing the improvement process. This level of support, however, resulted in no improvements in student achievement relative to comparison schools or the district. In the final three years of the study, the researchers provided a substantial increase in support to schools, including external support to school leadership teams and 3.5 days of training institutes. This additional support was associated with two changes in the schools. First, instructional leadership team and grade level team meetings were more consistently held and more focused on improving teaching and learning than at the

comparison schools where those meetings were more frequently canceled and focused on non-instructional matters. Second, students at schools with additional support outperformed students at comparison schools on the Stanford 9 assessment.

The SAM improvement process in New York City provides another example of the promising role of additional support. The effects of rolling out the SAM improvement process across New York City were highly variable (Talbert, 2011). Talbert, Mileva, Chen, Cor, & McLaughlin (2010) analyzed the role of external facilitators that support inquiry teams in implementing the SAM model. They found that ratings of facilitator support were correlated (though not at statistically significant levels) with survey indicators of the school's "inquiry culture," which included measures for "culture of assessment use" and "leadership for data-based improvement."

These studies suggest that external support may increase the impact of improvement processes on student learning and changes in teacher practice. The two studies do not explicitly link to SIPs; rather, they focus on support for improvement processes in general. Nonetheless, if a goal in CPS is to use SIPs as a school improvement process, then it seems likely that external support will be helpful.

Feedback about progress towards goals is correlated with increases in performance

In my initial interviews with CPS district leaders about SIPs, many lamented the lack of systems to provide feedback to schools on their plans. Unfortunately, I could not find any studies that evaluated the impact of district feedback to schools on their SIPs. The impact of feedback from teachers to students, however, has been studied extensively.

Hattie & Timperley (2007) describe the synthesis of over 500 meta-analyses, representing approximately 25 million students, on the impact of various factors on

student achievement. They find that feedback, which they define as “information provided by an agent... regarding one’s performance or understanding” is in “the top 5 to 10 highest influences on achievement” (Hattie & Timperley, 2007, p. 81 and 83).

However, they also note that the impact of feedback on learning and achievement can be positive or negative, depending on the type of feedback given. They assert that effective feedback must answer three major questions:

- Where am I going? (What are the goals?)
- How am I going? (What progress is being made toward the goal?)
- Where to next? (What activities need to be undertaken to make better progress?)

Although these three questions were originally developed to focus on teacher feedback to students, they can provide a framework for organizing feedback to schools on their SIPs: What are the attributes of a successful SIP? What progress have schools made towards those attributes? What are the next steps for schools to improve their SIPs?

Examples from Practice: Madison, WI, Boston, MA, and Prince George’s County, MD

The school districts of Madison, WI, Boston, MA, and Prince George’s County, MD are currently investigating how to more tightly couple school improvement plans to school improvement processes by providing sufficient support and feedback. These school districts are implementing many of the lessons from the research described in my Review of Knowledge for Action and can provide possible models for Cambridge.

Madison, Wisconsin

Although the Madison Metropolitan School District (MMSD) has roughly four times as many students as CPS, they have very similar proportions of low-income students – 48.4% of MMSD students are “economically disadvantaged” and 45.4% of students in CPS are “low-income” (“Selected Populations (2013-14) - Cambridge (00490000),” 2014, “WISEdash Public Portal,” 2014.). Furthermore, both districts are members of the Minority Student Achievement Network, “a national coalition of multiracial, suburban-urban School Districts that have come together to understand and eliminate achievement/opportunity gaps that persist in their schools” (“MSAN - Minority Student Achievement Network,” 2014).

MMSD’s strategic framework cites the school improvement plan as the “driving force” for the district’s theory of change (“Madison Metropolitan School District Strategic Framework,” 2013). The guiding theory behind the MMSD school improvement plan is actually an improvement process: the Data Wise Improvement Process (DWIP) (Boudett et al., 2013). The district has created an [extensive toolkit](#)² that guides school building leadership teams (SBLTs) in creating their school improvement plans and follows the same three overarching steps as DWIP: prepare, inquire, and act. The process for SBLTs begins with steps associated with developing effective teams: determining membership, defining roles and responsibilities, and conducting effective meetings. There is extensive guidance for how to design the SIP, in the form of an excel template that requires specific strategies for literacy, instructional practice, school structure, culture and climate, well-rounded access and participation, and family and

² <https://ts.madison.k12.wi.us/sblt-toolkit-2014-15>

community engagement (“2014-15 School-Based Leadership Team (SBLT) Toolkit | Technical Services,” n.d.). The SIP template also includes a tab for “Assessment Calendar” that requires SBLTs to identify the “data you plan to review at SBLT meeting(s) for each month.” This step ensures that the SIP is connected to the on-going improvement processes of the SBLTs.

The district has also set up extensive supports for SBLTs in this work. First, the district toolkit contains 21 different tools to support SBLTs, such as a “question checklist to finalize the SIP” and 13 different examples of the tools in use, even including a video example of conducting a root cause (“2014-15 School-Based Leadership Team (SBLT) Toolkit | Technical Services,” n.d.).

In addition, Rodney Thomas, special assistant to the Superintendent, explained that the district has full-time positions called “school improvement partners,” whose responsibilities are to work with principals to ensure they have the support they need to design, implement, and measure their SIPs (personal communication, 2014). The Chiefs of Schools (who directly oversee principals) also spend a significant amount of time visiting schools to monitor their progress on their SIPs and ensure that SIPs are embedded in the everyday work of principals.

The 2013-14 school year was the first year of implementation of the new SIP structure in MMSD. According their annual report, measures of reading growth increased 7%, 11%, and 5% overall at grades 3, 5, and 8, respectively, and the gains were consistent across almost every demographic group of students (Madison Metropolitan School District, 2014), though it will probably never be possible to know the causal relationship between the SIP systems and these achievement gains. Anecdotal evidence,

however, suggests that teachers and principals find the new SIP system to be more connected to their day-to-day work. One 3rd grade teacher said, “This is the first year that I’ve actually thought our school improvement plan was useful to me because it was so focused, and all of our staff development was focused on our SIP plan and our goals” (Madison Metropolitan School District, 2014).

Boston, Massachusetts

The Boston Public Schools (BPS) serve nearly ten times as many students as Cambridge (approximately 57,000 students), and the students in those schools are more frequently low-income (78% of students in BPS are low-income, compared to 45.4% of students in CPS) (“BPS at a Glance 14-1030.pdf,” n.d.). Despite these differences in student populations, however, Boston and Cambridge have a shared political and policy context because they are both classified as “urban” districts in the same state.

In the 2013-2014 school year, BPS created a district-level team that is entirely devoted to supporting improvement processes within schools. The Office of Data and Accountability now houses a team of six “inquiry facilitators” whose full-time jobs are to support school teams in conducting cycles of the Data Wise Improvement Process. Each inquiry facilitator supports three grade-level teams and the school-wide instructional leadership team at four schools in BPS. They use a gradual release of responsibility model over the course of three Data Wise cycles in the school year: the district-level inquiry facilitator models the facilitation of the first cycle, co-plans the second cycle with school-level team leaders, and observes the school-level team leaders facilitating the final cycle. Schools must apply for the opportunity to work with the inquiry facilitators and must demonstrate commitment from teachers and principals for engaging in inquiry

cycles throughout the year (Boston Public Schools, 2014). The inquiry facilitators attend each inquiry team's meeting twice a month and meet with school-level facilitators twice a month as well.

Although the inquiry facilitators are supporting schools in improvement processes, their connection to a school's formal school improvement plan (now called the Quality School Plan, QSP, in BPS) has not yet been clarified. The team's director, Mary Dillman, explained that, in an ideal world, the QSP would be a "charter for inquiry" and inquiry teams would choose a goal from the QSP as the focus area that guides the Data Wise cycles (personal communication, 2014). However, Dillman noted that focusing too closely on goals in the QSP could lead to inquiry cycles that are more rooted in data from state assessments than in evidence from daily instruction.

Since the inquiry facilitators have only existed since Fall 2013, their impact on student learning and teacher practice is unclear, though anecdotal evidence seems promising. HGSE doctoral candidate Meghan Lockwood is studying the inquiry facilitators for her dissertation and notes that many teachers report that inquiry meetings have caused them to work together in a new way. In addition, she recounts that at least one principal attributed test score improvement to the inquiry work (personal communication, 2014). Although BPS has used alternative inquiry cycles in the past, such as the Collaborative Coaching and Learning (CCL) cycle ("Collaborative Coaching and Learning | BPE," n.d.), the district allocated funding away from supporting those cycles several years ago, leaving the district without a consistent improvement process. In contrast, BPS renewed and expanded the inquiry facilitators program using the Data

Wise Process for the 2014-15 school year, suggesting some level of belief in the efficacy of the model.

Prince George's County, Maryland

Prince George's County Public Schools (PGCPS) is located in Maryland, just outside of Washington, DC. One of the twenty largest school districts in the country, PGCPS has 207 schools with more than 125,000 students, 63% of whom are "economically disadvantaged" ("About PGCPS," n.d.).

More than any other district of which I am aware, PGCPS has shifted away from a focus on SIPs towards a continuous improvement process. In 2012 and 2013, leaders from 23 of the district's schools were trained in the Data Wise Improvement Process and began using it in their schools as part of a district-level pilot program. In the summer of 2014, PGCPS made the decision to use DWIP in all of its 207 schools. To support this work, the district created the Office of Continuous Systemic Improvement (OSCI), led by Dr. David Rease, Jr., who has extensive experience in leading the Data Wise Improvement Process. OSCI integrates DWIP into the Public Education Leadership Project (PELP) Coherence Framework, which was designed to "help leaders recognize the interdependence of various aspects of their School District – its culture, systems and structures, resources, stakeholder relationships, and environment – and to understand how they reinforce one another to support the implementation of an improvement strategy" (*Coherence Framework*, n.d.). Dr. Rease oversees a team of nine "improvement specialists" who are responsible for leading trainings and providing individualized support for school leaders in using the Data Wise process.

In some ways, the work of the OSCI team is similar to the support provided by school improvement partners in Madison and inquiry facilitators in Boston, though there are two important differences. First, PGCPS has replaced SIPs entirely with the Data Wise process. Schools no longer submit a formal school improvement plan, but instead complete an on-going “Journey Presentation” that documents each school’s work for improvement in a Google presentation that is shared virtually with OSCI staff. Schools complete the presentation throughout the year and receive ongoing feedback from the improvement specialists. When I visited PGCPS in January 2015, OSCI staff members reported that many school leaders are struggling with the notion that there is no longer a formal document that they must submit because they have become accustomed to the compliance aspect of the former school improvement plans. Instead, school leaders are realizing that they are now held accountable for engaging in an improvement process. OSCI staff members shared that many schools are struggling with using the DWIP and that the transition is “messy.” Nevertheless, all OSCI staff members reported that this year’s work feels much more promising because schools are more focused than in the past and they will have plans in place to meaningfully assess their progress over time.

In addition, PGCPS is committed to ensuring that all district offices engage in DWIP as well. Each area office that supervises a group of schools will complete a journey presentation that is similar to those that schools complete. While the goal is for all other offices (such as Information Technology and Student Services) to complete the entire DWIP cycle in future years, the expectation for the 2014 – 2015 school year is that they complete the first step, Organizing for Collaborative Work. OSCI staff members provide training to each office in setting norms for collaborative work and

acknowledging work style preferences. The goal is to create a common language at all levels across the district for engaging an improvement process and to support all levels of the system in the ongoing work of improvement. In fact, a January 2015 PGCPS Strategy Team Newsletter cited “[embracing] Data Wise as a systemic continuous improvement approach” as one of the top six strategic priorities of the Superintendent.

It is too early to assess the impact of the system-wide shift to Data Wise in PGCPS, because it has been in place for less than a year. In a recent visit, I heard cautious optimism from members of a central office department participating in an OSCI training who shared that they felt closer as a team as a result of the training, but worried that the current focus on DWIP will disappear if the district leadership changes. The fear of impermanence seems well-founded in a district that has had eight different chief executives in the last 14 years.

Summary:

Table 3 summarizes each of the major findings from my research and how those findings apply to the context of the Cambridge Public Schools.

Table 3: Findings from Research and Lessons for Cambridge

<i>Finding from Research</i>	<i>Lesson for Cambridge</i>
1. Many stakeholders view SIPs as just exercises in compliance	Continually solicit feedback from school leaders and principals to better understand how SIPs can connect to their ongoing work.
2. School improvement <i>plans</i> , on their own, have no or limited impact on improving the quality of teaching and learning	Support an <i>ongoing process</i> of improvement (through identification of and reflection on short-term outcomes) rather than just focusing on writing the <i>plan</i>
3. Improvement <i>processes</i> (e.g. inquiry cycles) can positively impact learning	
4. Schools that are not provided with additional support for implementing improvement processes are less likely to use those processes to improve teaching and learning.	Pilot a more extensive support program for improvement processes at a small number of schools during the 2014-2015 school year.
5. Feedback that reduces discrepancies between current performance and a desired goal can lead to improvements.	Use a rubric to provide clear, actionable feedback to schools on their school improvement plans.

Theory of Action

My Review of Knowledge for Action leads me to the following theory of action:

If I can...

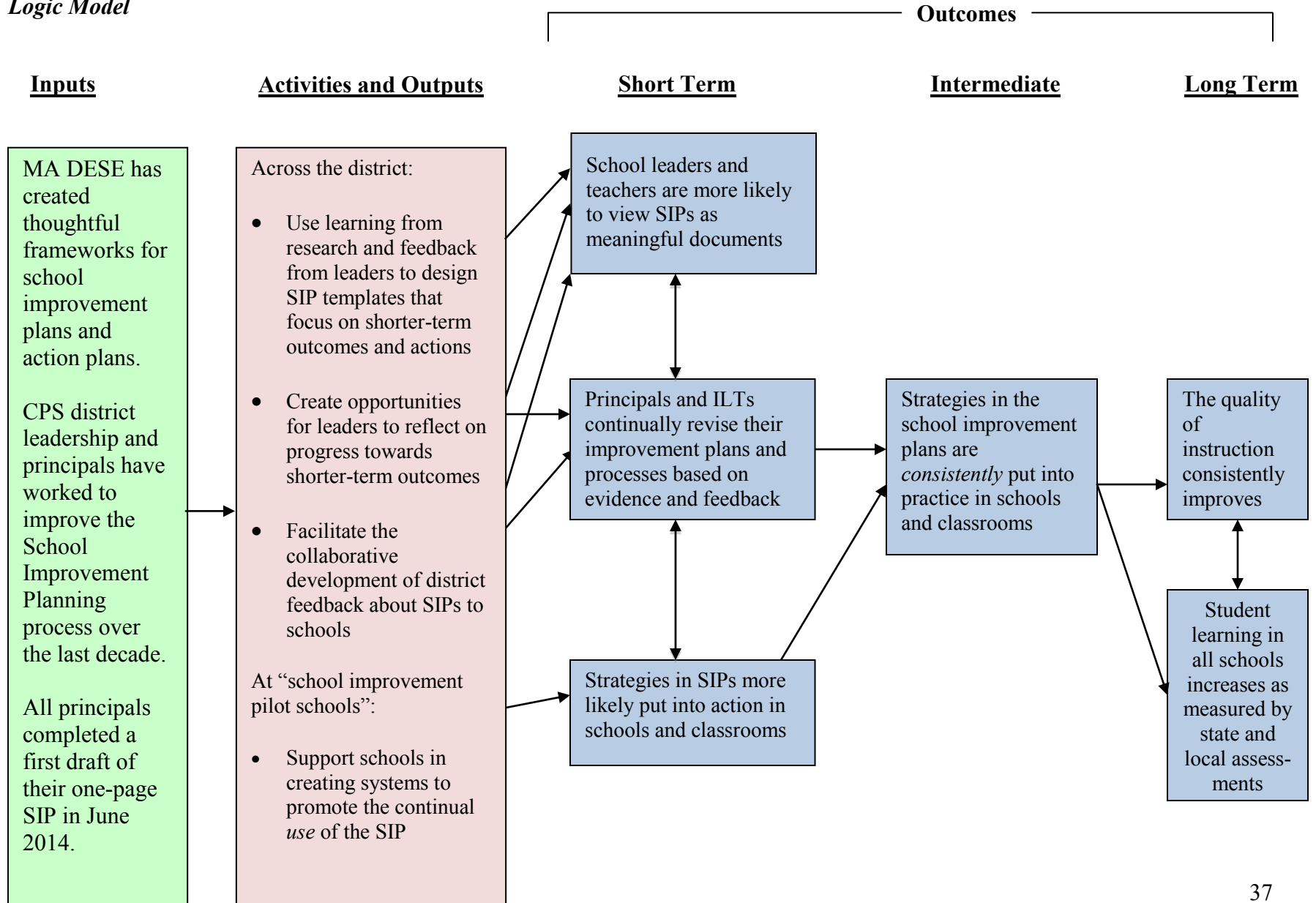
- Across the district...
 - Use learning from research as well as feedback from district and school leaders to design SIP templates that focus on shorter-term outcomes and actions;
 - Facilitate opportunities for school leaders to collaboratively reflect on progress towards those shorter-term outcomes;
 - Facilitate the collaborative development of district feedback about SIPs to schools with the aim of helping schools improve the actionability and focus of their SIPs;
- At “school improvement pilot schools” (Schools A – D, described in Description section)
 - Support schools in creating systems to promote the continual use of the school improvement plan and the connection to the instructional core (e.g. Data Wise cycles, other data cycles);

Then...

- Short-term outcomes for all schools, but especially for school improvement pilot schools...
 - School leaders and teachers will be more likely to view SIPs as meaningful documents;

- Principals and ILTs will continually revise their improvement plans and processes based on evidence and feedback (thus moving from a “plan” to a “process”);
- Strategies embedded in the school improvement plans will be more likely put into action in schools and classrooms;
- Medium-term outcomes...
 - Strategies in the school improvement plans will be consistently put into practice in schools and classrooms;
- Long-term outcomes
 - The quality of instruction consistently will improve;
 - Student learning will improve across all schools as measured by state and local assessments.

Logic Model



A caveat: rational vs. non-rational organizations

The logic underpinning my theory of action is likely incomplete. My theory of action and school improvement plans in general are based on what has been called the “rational” model of organizational behavior. Patterson, Purkey, & Parker (1986) define rational behavior as “logical behavior with clear connections between goals, organizational structures, activities and outcomes” (p. 23). They point out, however, that schools and districts rarely conform to the neat “if-then” expectations of logic. Fullan (2007) explains, “Even if rational theories of education were better developed – with goals clearly stated, means of implementation set out, and evaluation procedures stated – they would not have much of an impact, because schools, like other social organizations do not operate in a rational vacuum. Some may say that they should, but... they do not, and wishing them to do so shows a misunderstanding of the existing culture of the school” (p. 111). Patterson et al. (1986) suggest an alternative model: schools and districts as “non-rational” organizations. Importantly, they do not equate “non-rational” with “irrational,” but explain that districts and schools operate in complex, unpredictable ways in a world filled by change and uncertainty. Cambridge Public Schools, like all school districts, is likely to operate non-rationally.

In order to lead effectively in a non-rational organization, Patterson et al. (1986) recommend two strategies: strategic planning and empowerment. Both of these strategies are relevant to school improvement processes. The concept of strategic planning in Patterson et al. (1986) aligns closely to the concept of on-going improvement processes discussed in my Review of Knowledge for Action section. They assert that because a non-rational world is dynamic and full of rapid change, “a strategic plan [must be]

dynamic, ... constantly being monitored, interpreted, altered, improved, and, above all, implemented” (Patterson et al., 1986, p. 115). In particular, they recommend strategic plans that focus on shorter-term time horizons so that they can be adjusted to address unexpected changes in the internal or external environment.

The second strategy that Patterson et al. (1986) recommend for leading in a non-rational world is empowerment. They recommend that leaders empower members at all levels of their organization and set up “structures that create an integrated system with cross-cutting relationships and decentralized decision making” (Patterson et al., 1986, p. 91) because decision makers closest to the point of delivery have the most knowledge of all the dynamics at play. This strategy of empowering stakeholders across the organization aligns closely with the notion of “internal accountability” that I discuss at the beginning of my Analysis section.

Description of Strategic Project

Selecting a Strategic Project (July – August 2014)

Shortly after arriving in CPS in July 2014, I explored several potential options for my strategic project. In my entry interviews, members of the Superintendent's cabinet were mixed on their assessment of the potential value of each of the project options. Concurrently, I was meeting with the TLT to help plan the first instructionally focused professional development day for all principals and curriculum coordinators in the 2014-2015 school year. We decided to focus the session on supporting principals in conducting data analysis to inform their SIPs. As I took on a continually increasing leadership role in the planning for the day, I explored the possibility that my strategic project could focus on school improvement.

Improvements to the CPS SIP model were underway before my arrival in Cambridge, but remained unfinished. Initial revisions began in the 2013-14 school year, with the goal of creating a focused, concise, and accessible document that is aligned with the Massachusetts Department of Elementary and Secondary Education (DESE) Planning and Implementation Framework (Massachusetts Department of Elementary and Secondary Education, 2013). A description sent to school leaders in May 2014 described the new SIP model as consisting of a data analysis section, a two-year improvement plan, and a one-year action plan that included early evidence of change benchmarks, as recommended by the DESE model. A one-page template for the two-year improvement plan was sent to school leaders in June 2014, but the templates for the data analysis and action plan sections had not yet been created in July 2014. Furthermore, as I would ultimately write in my strategic project Memorandum of Understanding (Appendix 2),

“There are currently no district systems for feedback and support for school improvement plans in Cambridge and there are no clear processes to guide continuous improvement.”

In August, I developed an initial project proposal based on research I conducted for my Review of Knowledge for Action. I facilitated a protocol with the Teaching and Learning Team in August to gather feedback to improve the proposal. Since SIPs fall under the responsibilities of each member of the TLT, it was important to gather each of their feedback and approval in order to move forward. One TLT member told me in July that, if I were to choose to focus on SIPs, I would have the opportunity to build systems and structures to support collaborative work at the district leadership level since SIPs involve so many district leaders. At the same time, however, she warned that I would be “sticking my finger in the electric socket” because so many different district leaders are responsible for different aspects of SIPs, each of whom have different priorities and perspectives. Although I was nervous about these challenges, I was also excited about the learning opportunities that would be created in such an ambiguous environment. The Superintendent was supportive of the project and I revised my proposal into a Memorandum of Understanding that I submitted on August 29, 2014 (Appendix 2).

After selecting my strategic project, my work roughly consisted of four phases that are outlined in Table 4. I describe each phase in more detail below.

Table 4: Timeline of Residency Phases

<i>Phase</i>	<i>Description</i>	<i>Timeline</i>
1	Developing SIP templates and training principals through administrator meetings	August – October 2014
2	Facilitating district feedback to schools on their SIPs	November 2014
3	Supporting school teams in reflecting on short-term progress in SIPs	January – February 2015
4	Providing additional supports to “school improvement pilot schools”	October 2014 – May 2015

Phase 1: Developing SIP templates and training school leaders through administrator meetings (August – October 2014)

When I began my residency in July 2014, the district had already adopted a new SIP template that we eventually titled “Plan Overview” (see Table 5). Each school in Cambridge used that template in June 2014 to submit a 1 – 2 page overview of their SIP. These plans were still considered drafts, however, because schools did not yet have the results of the 2014 MCAS and lacked an analysis of data and more detailed action plans. The first phase of my strategic project focused on facilitating the development of the additional SIP templates (beyond the Plan Overview) and training school leaders in how to use them. The training occurred during “administrator meetings,” which are monthly, full-day professional development sessions for all CPS principals (and occasionally curriculum coordinators as well) that are facilitated by the TLT and other members of the Superintendent’s cabinet. Table 5 briefly describes the final versions of each section of the SIP template as they were presented to schools in Fall 2014. Each section evolved over the course of my residency and sections 4 and 5 were not yet present in the vision of the SIP in July 2014.

Table 5: Summary of CPS SIP sections, 2014-15 (abridged examples in Appendix 3)

<i>Section of CPS SIP</i>	<i>Key attributes</i>	<i># of pages</i>	<i>Template developed</i>	<i>Principal Prof. Devel.</i>	<i>1st draft due to district³</i>
Plan Overview ⁴	<ul style="list-style-type: none"> • Vision • Theory of action • Strategic objectives • Strategic initiatives • Outcomes in June 2016 	1 – 2	Spring 2014	Spring 2014	June 2014 ⁵
Data Analysis	<ul style="list-style-type: none"> • Areas of strength • Areas for improvement • Disaggregated by student sub-groups • Observations of data • Hypotheses of potential causes 	2 – 5	July – Aug 2014	Aug 21, 2014	Oct 1, 2014
Action Plan	<ul style="list-style-type: none"> • Description of 2 – 3 “priority” initiatives, one of which must focus on math • Outcome at end of school year • Outcome at end of December 2014 • How schools will know if that outcome is an improvement • Action steps to meet short term outcome 	3 – 6	Aug – Sept 2014	Sept 12, 2014	Oct 31, 2014
Additional Considerations	<ul style="list-style-type: none"> • Description of prof. development • Alignment of resources • Who was involved in creating SIP 	1 – 2	Sept 2014	Oct 14, 2014	Oct 31, 2014
Self-reflection rubric	<ul style="list-style-type: none"> • Schools rate selves on progress towards nine indicators of effective SIPs 	1	Sept 2014	Oct 14, 2014	Oct 31, 2014

³ The *revised* drafts of all sections were due to the district on December 19, 2014, after we provided feedback to all schools on their SIP using a rubric in November 2014.

⁴ The “Plan Overview” section was developed by the TLT prior to my arrival in CPS in July 2014.

⁵ A second draft of this section was due on Oct 1, 2014

Data Analysis Template: In July, I facilitated a series of meetings on the TLT to develop a Data Analysis template that would guide school leadership teams in identifying the areas of greatest need of improvement based on data. We agreed that the template should support schools in analyzing areas of strength in addition to areas for improvement in order to celebrate the accomplishments of each school and not stay in a deficit mindset. Because Cambridge has persistent achievement gaps among many groups of students, we also agreed that it was important for schools to disaggregate some of their data by student groups that show the greatest gaps in achievement (e.g. low income students, students with disabilities, or African American/Black students).

The TLT planned the August 21, 2014 administrator meeting for all principals and curriculum coordinators to build participants' capacities in analyzing data and in using the new SIP Data Analysis template. We facilitated a series of protocols that guided participants in identifying root causes behind their observations of district-level data, and in giving each other feedback on their initial drafts of the SIP Plan Overview and Data Analysis Sections.

Action Planning Template: In order to truly impact practice, we needed to shift from a static plan to an on-going process. The TLT had already announced to schools in Spring 2014 that the new SIP process would include an action planning template that could be used to assess progress over time with early evidence of change benchmarks, but the template had not yet been designed. The research that most clearly pointed how to do this was the Model for Improvement (Langley, 2009) that is embedded in a continuous "Plan, Do, Study, Act" cycle and focuses on developing systems for continuously analyzing short-term outcomes. This model asks 3 questions: 1) What are

we trying to achieve? 2) How will we know if a change is an improvement? and 3) What changes can we make that will result in improvement? To use these questions in the CPS SIPs, I believed it was essential for schools to develop short-term outcomes. Prior to this year, school leadership teams were not able to continuously adjust their plans and actions based on data because CPS SIPs had historically only included year-end outcomes that were based on MCAS results (which are not released until August, after the school year ends).

I began developing a template for action planning that specifically embedded short-term outcomes using the three questions from the Model for Improvement in this form:

1. What are you hoping to achieve in this initiative by December 31?⁶
2. How will you know if a change is an improvement by December 31?
3. What changes are likely to result in improvement? Describe your plan to implement this initiative.

In addition, evidence suggests (e.g. Kaufman et al., 2012) that it is important to focus improvement efforts, rather than trying to do everything all at once. Thus, I suggested that schools develop action plans for just 2 – 3 priority initiatives or objectives, rather than for all the possible initiatives and subject areas that they could choose. Initially, there was some disagreement on the TLT that this new focus was the best direction for the district. For example, one TLT member advocated for an approach where schools identified a few key benchmarks for each of the objectives in their plan overview. Since my research demonstrated that district administrators often had divergent perspectives on

⁶ The date of December 31 was chosen somewhat arbitrarily. We knew we wanted schools to reflect on shorter-term outcomes, but the date could just as easily have been January 31.

SIPs from staff at the school level, it was critical to interview school-level leaders to better understand their perspectives. To that end, I interviewed four principals (who were recommended by their supervisors because they might be interested in providing feedback to me) in early September to ask their feedback on two potential action plan templates. They unanimously preferred the simplicity and focus on the action plan based on the Model for Improvement (Appendix 3) and that is ultimately what we adopted.

Although the members of the TLT (including myself) agreed on the overall design of the Action Plan template, there was still disagreement about the extent of guidance we should give to schools on their choice of priority objectives and initiatives. In other words, could each school choose whatever priorities they wanted, or would we specify an area of focus to achieve some level of district-wide coherence? Ultimately, we decided that since the district had just invested in a new math curriculum in grades K – 8, we would ask each school to have one of their 2 – 3 priority objectives or initiatives focus on mathematics. We also wondered whether or not to require each school to develop an action plan focused on supporting specific groups of students, such as students with disabilities. We decided that rather than focus on specific groups of students in separate initiatives, we would ask schools to include a focus on closing achievement gaps throughout each of their priority initiatives and objectives.

Once the draft Action Plan template was developed, we needed to determine how to support principals and their leadership teams in using it. One of the principals I interviewed noted that developing short-term outcomes was a significant shift in practice for school leadership teams and that we would be well served by dedicating substantial

administrator meeting time towards understanding and practicing with the new action planning template.

Therefore, I planned the next administrator meeting, on September 12, 2014, to support principals in using the Action Plan Template. After I presented findings from my research about the need to shift from an improvement plan to an ongoing improvement process, we facilitated a series of whole-group, small-group, and individual activities to practice writing Action Plans using our new template. We also solicited feedback on the template from all participants.

Additional Considerations and Self-Reflection Rubric: The feedback from principals and curriculum coordinators at the September 12 Administrator meeting pointed out gaps in the design of the SIP. They noted that no section of the SIP asked about professional development, resource alignment, or stakeholder involvement, but that each of those areas would be critical to meeting any of the goals in the SIP. Therefore, we added questions about those categories as a page titled “Additional Considerations.” Finally, we added a self-reflection rubric (discussed in Phase 2, below).

To determine how to best support schools in their work, I reached out again to a principal who had been very helpful in designing the September administrator meeting. He told me that he thought the most important need he and fellow principals had was time to work on the plan and that time would be best spent with members of their instructional leadership team (ILT). Therefore, we invited principals to bring any members of their ILT to the next administrator meeting on October 17 and gave them two hours of time to work on their action plans. During that time, district leadership circulated to support them in their work. We also presented the Additional

Considerations and Self-Reflection Rubric sections to principals at the October 17 meeting.

Many principals also noted that the templates and examples had only been shared with them over email and were not organized in an easy to access place. I remembered that the Madison Metropolitan School District had organized all of its tools for SIPs into one online toolkit for school teams. Therefore, I created a Google folder that included all the latest SIP templates, examples of completed SIP templates, presentations from administrator meetings, and protocols used in meetings. I shared the folder with school leaders at the October administrator meeting.

Phase 2: Facilitating district feedback to schools on their SIPs (November 2014)

Once we developed the SIP templates and trained principals in their use, we knew we would need a system to provide feedback to schools on their SIP drafts. All the improvement processes described in my Review of Knowledge for Action rest on the value of feedback loops that are driven by data that assess progress towards goals (e.g. Boudett et al., 2013, Langley, 2009). Similarly, most models of effective teaching rely on high-quality feedback to students to help them continually improve their performance (e.g. Black, Harrison, Lee, Marshall, & Wiliam, 2009; Saphier, 2008). There had previously been minimal district-level systems for giving feedback to schools on their SIPs; some schools received limited feedback from their principal's supervisor or the district's Assessment Specialist, but this practice was inconsistent. Therefore, I knew that giving feedback to schools on their SIPs would be a key area of focus for my work in the hopes of supporting schools in continuously improving their plans and developing clear short-term outcomes that could be used in on-going improvement processes.

To enable consistent and targeted feedback to schools on their SIPs, I suggested that the TLT develop a rubric to evaluate the first drafts of schools' plans. Such a rubric would facilitate information about the three questions Hattie and Timperly (2007) identify as "effective" feedback: 1. Where am I going? (What are the goals?) 2. How am I going? (What progress is being made toward the goals?) 3. Where to next? (What activities need to be undertaken to make better progress?)

I used a collaborative protocol that involved each member of the TLT in designing the rubric (Appendix 3 and Appendix 4). We decided that the rubric would be more meaningful if school teams self-assessed their progress using the rubric before turning in their draft plans. Therefore, we included a self-reflection rubric as the last page of the SIP template (Appendix 3).

Since the members of the TLT each have unique areas of expertise (such as curriculum or special education) I believed that involving all members in collaboratively generating feedback to schools would generate the most useful, thoughtful feedback. To that end, I created a Google spreadsheet that allowed each member of the TLT to individually enter their comments and scores in a separate column (see Appendix 5 for an example) that we could review when we met as a group to discuss similarities and differences in our feedback. I scheduled approximately two meetings per week, each approximately 90-minutes long, during the month of November for the TLT to meet together to synthesize our feedback to schools on their SIPs.

The feedback process on the TLT evolved over time, but always consisted of individual pre-work and a collaborative TLT meeting to synthesize our feedback. After the meeting, the principal's direct supervisor (either the Deputy Superintendent or the

Assistant Superintendent for Elementary Education) met with the principal and members of their leadership team to describe the feedback in person. In addition, I shared the Google rubric we completed with the principals and their leadership teams. The very abridged example in Table 6 demonstrates how members of the TLT provided individual feedback on each indicator (one TLT member did not give numerical scores; all indicators and our overall feedback, including questions for consideration are shown in Appendix 5).

Table 6: Abridged Example of SIP Feedback (see Appendix 5 for full example)

<i>Indicator</i>		<i>CPS Person #1</i>	<i>CPS Person #2</i>	<i>CPS Person #3</i>
Performance Levels: 4 = exceeds expectations; 3 = meets expectations; 2 = approaches expectations but revision required; 1 = not present				
	Score	3.5		3
1. All sections of the SIP align to each other (i.e. data analysis, theory of action, strategic objectives, strategic initiatives, action plan)	Comments	All sections of the plan are aligned and make the case for a strong RtI model.	Wise decision on the part of the school to focus on three strategic objectives during this first year of tradition with a new leader. Alignment exists across and between sections of the plan. Have they returned to a Humanities model?	Most sections show clear alignment -- particularly the data supporting the need for improved math instruction and RtI. I am less clear about the data supporting Action Plan #3: refining social studies units to include more writing.

Phase 3: Supporting school teams in reflecting on short-term progress in SIPs

(January – March 2015)

The goal of defining short-term outcomes is to enable an improvement process where schools critically reflect on their progress towards those outcomes well before the end of the school year. It follows, therefore, that if the district does not create structures for schools to reflect on progress towards early evidence of change benchmarks, then the benefits of writing them are greatly diminished. To that end, I wrote a protocol in December 2014 for schools to use in reflecting on their progress towards the short-term

goals they identified in their Action Plan. To write the protocol, I collaborated with a fellow Ed.L.D. Cohort 3 member engaged in similar work for his residency and a consultant to CPS who has written many protocols for the National School Reform Faculty.

The protocol guides participants through a “What? So What? Now What?” process that is summarized below and included in full in Appendix 6.

Summary of SIP Reflection Protocol:

1. *What?* The group gathers information on chart paper
 - a. Did we do, somewhat do, or not do the actions we said we would do?
 - b. What evidence of impact on teaching or learning do we have?
2. *So What?* The group makes meaning of the observations from Step 1
3. *Now What?* What are our next steps? How can we revise our action plan?

An initial draft of the protocol asked principals to submit a revised version of their action plans and a two-paragraph reflection to their supervisor after completing the protocol. The CPS consultant who provided feedback argued that that requirement would make the protocol into more of a compliance activity. I agreed, but still wondered how we might hold schools accountable for completing the protocol.

I introduced the protocol at an administrator meeting on December 19, 2014 and offered to help facilitate it at any school that was interested in piloting it. One principal responded that she was interested, and I observed the protocol in practice at her school on January 6, 2015. The participants stated that the reflection protocol was a positive experience for them, which I describe in more depth in the Results to Date section.

After this initial, positive experience, the TLT had to decide whether to make the process mandatory and, if so, by what date to ask schools to complete it. Although mandating the use of a specific protocol could reinforce the view of the SIP as an exercise in compliance, I believed the protocol to be such a positive tool for shifting towards an ongoing improvement process that the benefits outweighed the potential costs. Therefore, I advocated that we require schools to complete it, and the rest of the TLT agreed. To determine the completion date for the protocol, I interviewed a principal who pointed out that since the final version of the SIP was not due until mid-December 2014, schools would need several months to implement the plan before reflecting on it. Furthermore, she pointed out that many schools only schedule ILT meetings once a month and may have already set agendas for many of the meetings. To strike a balance between these challenges and a desire to get a reflection loop in before the end of the school year, at the January 16, 2015 administrator meeting, we asked schools to complete the protocol by March 20, 2015. At the January administrator meeting, the principal who completed the protocol at her school shared how useful she found the protocol, and shared suggestions for how other schools could use it effectively.

Phase 4: Providing additional supports to “school improvement pilot schools” (October 2014 – May 2015⁷)

One of the key findings of my Review of Knowledge for Action is that schools and their leadership teams need additional support to engage in the ongoing work of improvement. The school districts of Madison, Boston, and Prince George’s County each invested in creating positions whose full-time responsibilities are to support schools

⁷ Although this phase actually begins before “Phase 3,” I thought it made sense to describe Phase 3 first because it was so connected to the earlier phases.

in improvement. Given the promising impact of these unique roles in other districts, I proposed that I could pilot the role of supporting school improvement efforts myself as part of my project. On October 14, the Deputy Superintendent sent out an email that I wrote to all principals seeking a few schools as volunteers in a “School Improvement Pilot Program” (see Appendix 7). The goal of the pilot was to identify ways to help schools actually *do* something with their SIPs through the creation of school improvement processes. I offered to support schools in planning and facilitating ILT and school council meetings, gathering and analyzing formative data, drafting and revising their plans, and utilizing the latest findings from research. In return, I asked that participating schools commit to setting up a meeting between the principal and me every two weeks for 30 minutes, invite me to all ILT and school council meetings, and give me opportunities to meet with coaches and teachers as appropriate.

Of the 17 schools in CPS, principals from four schools responded as interested in the pilot. The four schools represented a diverse group in terms of student population and performance level as defined by the state⁸ as shown in Table 7.

⁸ According to <http://www.doe.mass.edu/apa/accountability/2014/SchoolLeadersGuide.docx>, a Level 1 school is “meeting gap narrowing goals,” a Level 2 school is “not meeting gap narrowing goals,” and a Level 3 school is “among the lowest performing 20% of schools” in the state

Table 7: Schools who agreed to participate in improvement pilot program

<i>School</i>	<i>MA performance level</i>	<i>Summary of support provided</i>
A	Level 1 (meeting gap narrowing goals)	Facilitated Data Wise Improvement Process on Grade Level Team with principal and coaches, approx. one meeting per week
B	Level 1 (meeting gap narrowing goals)	Facilitated Data Wise Improvement Process on Instructional Leadership Team, approx. one meeting per month
C	Level 3 (among the lowest 20% of schools in the state)	Helped identify interim assessment system
D	Level 2 (not meeting gap narrowing goals)	Minimal

One of my goals in working with these schools was to investigate a range of possible support strategies to ultimately inform a recommendation to the district about how to best support schools in improvement efforts in the future. Therefore, I was not attempting to conduct identical work at each school, but instead aimed to provide divergent levels and types of support, all in the service of using their SIPs in an ongoing process, based on the individual needs of the schools. I briefly describe my work until the end of January 2015 (the time of writing this capstone) with each school. My work at Schools A and B was more extensive than at Schools C and D and revolved around the Data Wise Improvement Process (Boudett et al., 2013). Throughout this section, I describe various stages in the DWIP, which are presented in Appendix 8 for reference. I discuss possible explanations for why I was able to provide more support to Schools A and B in the Analysis section.

School A: My support of School A was the most consistent of the four pilot schools. I met with one grade-level teacher team, the principal and the instructional coaches approximately once per week starting in late November 2014 until the end of my residency. My goal was to support them in completing a full Data Wise cycle on that grade-level’s team.

In initial meetings with the principal, I learned that although improvements in math were a school-wide goal, the principal was especially interested in improving math teaching and learning at a specific grade level because both the proficiency rates and growth rates at that grade-level lagged consistently behind the school overall. Since the Data Wise Improvement Process can be used on a grade-level team (Boudett et al., 2013), I thought it might be a useful process at School A. When I suggested using the DWIP, the principal shared that all teachers at that grade level were extremely open to learning and eager for new strategies.

Thus, we began a formal Data Wise cycle on that grade-level team, beginning in late November 2014. The team members in this process were the two grade-level teachers, the principal, the school's math coach, the literacy coach and myself. My role was to help plan and facilitate the initial meetings, with the eventual goal of handing off both responsibilities to the principal, a coach, or the teachers. Although the schedule varied slightly from week to week (Table 8), the typical week consisted of an 80 minute meeting with all team members followed by a one hour planning session for the next week with the principal, the coaches, and me.

Table 8: Summary of Data Wise Meetings at School A, Nov 2014 – Jan 2015

<i>Date</i>	<i>Objectives of Data Wise Meetings</i>
25-Nov	Steps 1 and 2: set norms as team; understand the broader process of Data Wise; build assessment literacy by analyzing scenarios of misusing data.
3-Dec	Step 3: better understand “student growth percentile” and how it is calculated; analyze school overview data; identify a priority question (see Appendix 9 for example agenda)
17-Dec	Step 4, part 1: identify patterns in student performance on 5th grade MCAS math open response; create a plan for collecting additional sources of data at the next session
22-Dec	Step 4, part 2: analyze samples of student work in open response math questions to identify a specific learner-centered problem based on our priority question
7-Jan	Step 5, part 1: develop a shared understanding of effective practice for our learner-centered problem
14-Jan	Step 5, part 2: refine categories of reflective practice, and develop a plan for observing instruction
21-Jan	Step 5, part 3: observe instruction, share observations, and develop a problem of practice

Through these meetings, we collaboratively identified a specific learner-centered problem: “Students are struggling to recognize every part of the problem and label all their thinking and steps in multi-step word problems.” This learner-centered problem was closely aligned to the school-wide goal in their SIP: “In mathematics in grades 1-5, we will implement the Math in Focus transfer assessments and other similar open response type questions in order to better prepare students to answer novel or non-routine mathematics problems. Additionally, during student conferences we will provide students with targeted feedback utilizing a rubric about how they can improve.”

On January 21, 2015, we spent 45 minutes in each grade-level teacher’s classroom, taking notes on their instruction and shared our observations in a debrief afterwards. At the time of this writing, we were working on identifying a specific problem of practice, but were slowed down by unexpected snow days.

I had several conversations with the principal and math coach about how to sustain the Data Wise work after I leave the district in May 2015. I attempted to use a gradual release of responsibility process to ensure that School A leadership felt comfortable facilitating the Data Wise process.

School B: My support at School B focused on helping plan and facilitate their monthly instructional leadership team (ILT) meetings to connect their school improvement plan goals more closely to teacher practice, using the Data Wise Improvement Process. The ILT at School B consisted of the principal, reading coach, math coach, program manager, and seven teachers.

In initial planning meetings with me, the principal shared that it would be useful to capitalize on the diversity of the ILT to more clearly identify the changes in practice needed in the SIP goals. When I suggested that this need closely paralleled steps in the Data Wise Improvement Process, the principal pointed out that four members of the leadership team had attended a week-long Data Wise training at HGSE in 2012. In addition, I thought that using DWIP on the ILT would provide an interesting comparison case to School A, where I was using the Data Wise Process on a grade-level team.

Initially, we planned to focus the ILT on the mathematics goal in their SIP. Through the SIP feedback process, however, we realized that their analysis of MCAS data showed that English Language Arts (ELA) was an even greater area of need than math. Therefore, although the school would still have an action plan focused on math as required by the SIP template, we chose reading as a focus area for the Data Wise Process. Initially, I suggested starting the Data Wise process from the beginning (Step 1), but the school leaders noted that they wanted to value the work that the staff had put in

throughout the previous years. They believed the school had already identified a clear “learner-centered problem” (LCP) in ELA: students are struggling to write about reading grade-level texts. This LCP aligned closely to the goal statement in the action plan of their SIP: “Provide a high quality ELA instructional program (Tier I) with an emphasis on reading comprehension and writing about reading.” Therefore, they argued, they should begin the Data Wise Process at Step 5: Examine Instruction. I worried about jumping ahead in the process too much and advocated for backing up at least to Step 4: Dig Into Data to analyze samples of student work and identify a more granular learner-centered problem based on data. The principal, program manager, and instructional coaches met on their own shortly before the ILT meeting and decided instead to begin with Step 5 to validate the work done over the past year with the larger faculty.

Table 9 summarizes the ILT meetings that I helped facilitate at School B. Each meeting lasted approximately 2 hours.

Table 9: Summary of ILT Meetings at School B, Nov 2014 – Jan 2015

<i>Date</i>	<i>Objectives of ILT Meetings at School B, with steps from DWIP</i>
20-Nov	Step 5: Achieve consensus on an LCP, collaboratively discuss what effective teaching practice would look like for that LCP, and determine a plan to collect data about current practice (see Appendix 10 for complete agenda)
18-Dec	Step 5: Analyze the evidence of instructional practice they collected since the last meeting and identify two specific problems of practice – one for the K – 1 grade levels and one for the 2 – 5 grade levels
20-Jan	Steps 6 and 7: Develop an action plan and create a plan to assess progress

School C: One of the key goals of School C for the 2014 – 2015 year, identified in their SIP, was to implement an interim assessment cycle that includes common assessments, data analysis, plans for reteaching and a feedback protocol for students. At their best, interim assessment cycles can be improvement processes themselves.

Therefore, I had initially hoped that working with School C would enable me to pilot an

improvement process that was not based on Data Wise, but instead on cycles of analyzing interim assessment data, such as the process outlined by Bambrick-Santoyo (2010). Although the School C leadership team was excited about the prospect of using interim assessment cycles, they did not have access to interim assessments, nor the capacity to create them in-house. As a result, I took the lead on researching a variety of options for interim assessment support and presented the pros and cons of each to the school leadership team on November 19. The team decided to adopt a system that houses a variety of online assessments, both formative and summative, and an array of reporting and intervention tools. Although I worried about how to build the school's capacity to use the information from the interim assessments, the team stated that they were very eager to "get some data" right away.

At first, I was the primary point person on the project, but realized that if all the knowledge about assessment system lived with me, the school would not be well set up for success when I left the district in May 2015. Therefore, at a meeting on December 5, I passed formal responsibility to the school's math coach and data specialist.

Although I continued to attend meetings regarding the interim assessment system at School C throughout January and February 2015, the leadership of those meetings shifted to the math coach, data specialist and a support team from the state. As a Level 3 School (lowest 20% of schools in the state), School C was supported by a District and School Assistance Center (DSAC) team. The principal of School C stated appreciation for the DSAC team members and I did not want to get in the way of the team's leadership of the initiative.

School D: Of the four schools that replied as interested in the pilot program, I provided the least support to School D. I met with the principal twice for one hour each to discuss ways to connect their school improvement goals to practice. I initially thought that School D would be another school that could benefit from using the Data Wise Improvement Process because an early version of the School D SIP Action Plan included a short-term goal of identifying a learner-centered problem and a problem of practice, both terms from DWIP. In my second meeting with the principal and the math and ELA coaches, however, they decided against this path. They stated that the work of identifying a specific problem of practice for teachers might uncover differences in beliefs about instruction that could be divisive amongst staff. They believed that the key change in practice needed was for teachers to give students opportunities to solve challenging math problems. Therefore, they decided to focus on the administration and scoring of assessment items in mathematics and they removed the language about identifying a specific teacher-centered “problem of practice” from their revised SIP. Since they were not yet interested in engaging in a process of inquiry around improvement, I never found a way to provide support for improvement processes at School D.

I discuss the connection between the level of support provided to schools and their capacity to engage in improvement cycles in the Analysis and Implications sections.

Results to Date

In this section, I describe the evidence of progress towards both the “if” and “then” statements in my theory of action. Throughout this and later sections, I refer to results from a survey (see Appendix 11 for full survey) that I administered to school-based staff in January and February 2015. 13 out of 18 principals (72%) of principals and at least one teacher or other (e.g. coach) from 12 of 18 schools (67%) responded to the survey. The survey I designed for principals was slightly different from the one I designed for teachers and other school-based staff. In particular, the survey for principals did not ask them to identify their school because that would have made them identifiable. I asked principals to send the survey to the instructional staff at their school and asked those respondents to identify simply as “teacher” or “not a teacher (e.g. coach/AP).” I henceforth refer to the “not a teacher” respondents as “other (e.g. coach).” In total, 13 principals, 36 teachers, and 22 others (e.g. coaches) responded. The variation in participation by school is shown in Table 10.

Table 10: Participation in SIP Survey By School
(Schools A – F refer to the same schools described with those pseudonyms above)

<i>School</i>	<i>Principal</i>	<i>Teacher</i>	<i>Other (e.g. coach)</i>	<i>Grand Total</i>
School A	0	0	2	2
School B	0	6	2	8
School C	0	0	0	0
School D	0	6	2	8
School E	0	0	0	0
School F	0	3	4	7
School G	0	2	2	4
School H	0	2	2	4
School I	0	2	1	3
School J	0	7	3	10
School K	0	5	3	8
School L	0	3	0	3
School M	0	0	1	1
Unknown	13	0	0	13
Grand Total	13	36	22	71

I chose not to identify the schools by grade band (e.g. elementary vs. high school) in Table 10 because that information, coupled with the DESE accountability level for schools A to D could have made them identifiable. I can state, however, that the participation in the SIP was not consistent across grade levels, with much higher participation at elementary schools than at the upper schools or the high school, as shown in Table 11.

Table 11: Participation in SIP Survey by Grade Level

<i>Grade Band</i>	<i>Principal</i>	<i>Teacher</i>	<i>Other (e.g. coach)</i>	<i>Grand Total</i>
Elementary (pre-K to 5)	0	34	19	53
Upper (6 to 8)	0	2	3	5
High School	0	0	0	0
Unknown	13	0	0	13
Grand Total	13	36	22	71

It is important to note that the survey respondents are unlikely to be representative of all school-based staff in Cambridge. Although 72% of all principals responded, the 36 teachers who responded represent only 6% of the approximately 600 teachers in Cambridge. Furthermore, it is possible that the principals, teachers, and other staff that did take the time to respond to the approximately 10-minute survey are staff members who are more engaged with the SIP process than their peers across the district. Therefore, the survey data could represent an overstatement of the engagement of school-based staff with the school improvement planning process.





Finally, because of the deadlines associated with submitting my capstone, I administered the survey before the vast majority of schools had been able to complete their SIP reflection protocol. At the time of the survey, only one school had completed the protocol, though all had hopefully engaged in more informal forms of reflection.

Thus, experience with some of the systems we created to shift the focus from a “plan” to a “process” (e.g. the reflection protocol) could not be factored into the survey results.

Table 12 summarizes the extent to which I met the “if” statements in my theory of action using results from the SIP survey and other sources of evidence. Two columns in the table may require further explanation. The fourth column is titled “Plus Results.”

This column summarizes the ways in which I was successful in completing each aspect of my theory of action. The fifth column is titled “Delta Results,” after “delta,” the Greek letter representing “change” in scientific and mathematical equations. The delta results summarize the ways in which I was not successful in meeting each aspect of my theory of action, suggesting the need for change in the future. I describe each summary statement in more detail below.

Table 12: Results Summary, Theory of Action “If” Statements

<i>Theory of action “if” statements...</i>	<i>Success to date</i>	<i>Phase of Residency</i>	<i>“Plus” results</i>	<i>“Delta” results</i>
Use learning from research as well as feedback from district and school leaders to design SIP templates that focus on shorter-term outcomes and actions		Phase 1: Developing SIP templates and training principals through administrator meetings	<ul style="list-style-type: none"> Created SIP Action Plan template with space for schools to identify short-term goals using Langley (2009) model Used feedback from school leaders to revise all templates All schools used the templates 	<ul style="list-style-type: none"> Did not solicit feedback consistently from principals The short-term goals many schools included were often not clearly defined
Facilitate opportunities for school and district leaders to collaboratively reflect on progress towards those shorter-term outcomes		Phase 3: Supporting school teams in reflecting on short-term progress in SIPs	<ul style="list-style-type: none"> Created a protocol for schools to use with ILTs. One school used it and reported a positive experience 	<ul style="list-style-type: none"> As of February 2015, only one school had used the reflection
Facilitate the collaborative development of district feedback about SIPs to schools with the aim of helping schools improve the actionability and focus of their SIPs		Phase 2: Facilitating district feedback to schools on their SIPs	<ul style="list-style-type: none"> Provided collaboratively generated feedback to 15 of 18 schools using a rubric. All principal survey respondents said accurate or somewhat accurate that feedback improved actionability and focus of SIP 	<ul style="list-style-type: none"> At least one school was unappreciative of the feedback Three members of TLT participated substantially less than others in giving feedback Sustainability of feedback in the future is questionable
Support schools in school improvement pilot in systems to promote the continual use of the school improvement plan and connection to instructional core		Phase 4: Providing additional supports to “school improvement pilot schools”	<ul style="list-style-type: none"> Piloted Data Wise Cycle at 2 schools: School A (on grade-level team), School B (on ILT) Anecdotal evidence of connections to instr. core 	<ul style="list-style-type: none"> Was unable to meaningfully support Schools C and D

If I use learning from research and feedback from district & school leaders to design SIP templates that focus on shorter-term outcomes and actions...



I successfully used research and feedback to design SIP templates that focused on shorter-term outcomes and actions. All schools included those shorter-term outcomes and actions in their SIPs, but many were too broad or vague to be helpful measures of success.

In terms of using research and feedback, I presented key takeaways from my research on school improvement plans to CPS principals and curriculum coordinators at the September 12, 2014 administrator meeting (e.g. we need to shift from a plan to a process and we need to continually solicit feedback from school staff to move beyond compliance). Second, I solicited feedback from principals and curriculum coordinators on the SIP templates at the September administrator meeting and used their feedback to revise the templates to include the Additional Considerations and Self-Reflection Rubric sections of the SIP. Finally, the SIP Action Plan template does, indeed, focus on shorter-term outcomes and uses the language from the Model for Improvement (Langley, 2009) that I encountered in my research. Finally, although not mentioned explicitly in my theory of action, I did not solicit feedback from teachers on their perspectives on SIPs in CPS until the survey in January – February 2015.

Although the Action Plan Template provided a structure for schools to identify clear, short-term goals under the “What are you hoping to achieve by December 31?” and “How will you know that a change is an improvement?” questions, evidence suggests that schools struggled to identify clear short-term goals. When the TLT provided feedback to schools on their draft SIPs, we rated each indicator on a scale of 1 – 4, where a “4”

represented “exceeding expectations,” a “2” represented “revision required,” and a “1” represented “not present.” Table 13 presents the average scores for each indicator across all 15 schools to which we gave feedback using the rubric. Although this information is imprecise and the differences between average scores are not statistically significant, it is notable that indicator #7: “early evidence of change benchmarks are measurable and actionable” had the lowest average score of any indicator (highlighted in gray in Table 13), though other indicators were low as well.

Table 13: Average Feedback Scores by Indicator on First Drafts of SIPs

<i>Indicator</i>	<i>Average Score</i>
1. All sections of the SIP align to each other (i.e. data analysis, theory of action, strategic objectives, strategic initiatives, action plan)	2.7
2. Data analysis is sufficient. The data analyzed focuses on the most important strengths and areas for improvement.	2.8
3. Focused on gap closure. Data analysis, improvement plan, and action plan focus on gap closure for student groups (e.g. high needs, students with disabilities, ELLs)	3.0
4. Objectives and initiatives focus on improving classroom instruction. The strategic objectives and initiatives are targeted at the instructional core.	2.7
5. All sections are clear. Data is presented clearly and visually, objectives and initiatives are clearly described, and action plan steps are understandable.	3.3
6. All required components are included. For example, one Action Plan focuses on mathematics.	3.2
7. Early evidence of change benchmarks are measurable and actionable. Action Plan includes reasonable measures of gauging success by the end of December and includes clear implementation benchmarks to achieve them.	2.6
8. Alignment of resources makes the plan achievable. There is evidence that financial resources, human resources, and professional development have been aligned to support the plan.	2.7
9. The process was inclusive. There is evidence that ILT members, School Council members, and other teachers/staff members were meaningfully involved in the development of the plan.	2.8

The scores in Table 13 represent the averages of the scores that we gave to schools on their first draft of the SIP and some schools improved their drafts after they were revised in November. Nevertheless, many SIPs still contained short-term goals that were too broad, vague or numerous to serve as clear short-term indicators of success. For example, School B included the following short-term goals in their revised SIP:

Table 14: School B Early Evidence of Change Statements in Revised SIP, 2014

Early Evidence of Change	
What are you trying to achieve in this initiative by Dec. 31?	<ul style="list-style-type: none"> • Deliver a high quality literacy program with fidelity. • Provide targeted Tier II interventions during Readers Workshop • Identify students that require Tier III instruction and plan interventions • Implement progress monitoring for students below benchmark • Weekly teacher and instructional coach meetings • Collaborative time for interventionists and classroom teachers as well as opportunities for special education consults • Provide varied opportunities to write about reading
How will you know if a change is an improvement by Dec. 31?	<ul style="list-style-type: none"> • Classroom observations: classrooms are actually doing their Tiers 1 and 2 rotations. • Lesson plans clearly layout small group work. Movement towards our goal to make intervention groups more pervasive. • Student work i.e., Literature Letters, notes, open response prompts show improvement in student performance. Student writing is more descriptive. • Additional progress Monitoring Results show improvement in student performance • Teacher/Interventionist and Teacher/coach meetings are more strategically coherent and effective (more purposeful and efficient). These should now be more focused on execution (using data to inform decisions) as opposed to earlier focused on learning roles and processes.

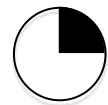
I believe it was difficult for School B to use the short-term goals as written in Table 14 to drive improvement processes for several reasons. First, many of the goals were too vague. For example, “deliver a high quality literacy program with fidelity” leads to questions such as, what do “high quality” and “fidelity” mean? Second, there

were so many short-term goals that it is difficult to imagine tracking progress towards all of them. Third, it is not clear how staff could have measured progress towards goals. For example, how would teachers have known if “student writing is more descriptive?”

These numerous and vague short-term goals contrast substantially with the more specific and descriptive learner-centered problem (LCP) and problem of practice (PoP) that School B identified through my support of a Data Wise Cycle with the instructional leadership team. Their LCP was, “Students are struggling to write about reading grade-level texts.” The PoP they identified at grades K – 2 was “As teachers, we will provide planned, purposeful opportunities for interactive writing around text.” The vague, numerous, and difficult to measure short-term goals in the Action Plan were not unique to School B and were found in many other CPS Action Plans. In addition, the PoP that School B identified through the Data Wise process was rooted in an examination of teacher practice. ILT members observed each other and reported that teachers were modeling and providing independent practice, but not using the interactive writing strategy.

Across the district, however, we did not support schools in using a process that explicitly linked the SIP goals to an examination of instruction, though goals may have been based in informal observations of teacher practice.

If I facilitate opportunities for school and district leaders to collaboratively reflect on progress towards those shorter-term outcomes...



Although I facilitated opportunities for school leaders to collaboratively *develop* short-term outcomes, I was not able to support most schools in *reflecting* on progress towards those outcomes (at least not by February 2015). The administrator meetings in

August, September, and October involved opportunities for principals, curriculum coordinators, and members of schools' instructional leadership teams to analyze school-level data, work together to write short-term goals, and provide each other feedback on their SIPs. I also developed a protocol for schools' instructional leadership teams to use in reflecting on their progress (see Appendix 6).

As of February 2015, however, only one school had used the reflection protocol, which I called School E in Table 10 because it was not one of the "improvement pilot schools." The participants in the protocol were all ILT members: the principal, assistant principal, literacy coach, math coach, early literacy interventionist, school psychologist, and a kindergarten teacher. I was present as an observer. The principal told the team that she decided to focus the meeting on reflecting on the upper elementary math goal in the SIP and shared that choice with the ILT members present. Many participants stated that they were unhappy about this choice because only one participant (the math coach) regularly interacted with upper elementary math instruction. The principal responded that she recognized this discrepancy, but thought the math goal was the most important need at the school and wanted to give the protocol a try anyway. After that initial discussion, the team loosely followed the protocol. Participants noticed two important patterns: 1) no one had any evidence that anyone was doing the majority of the activities they said they would do in their action plan and 2) they did not know how they would collect data to assess any impact of the strategies they were doing on student learning.

The principal asked during the meeting, "What does this say about our ability to observe and gather the data we need as an ILT?" Another participant suggested, "We could organize a learning walk for the ILT where we are looking for evidence." When

the principal shared the results of the protocol with other principals at the January administrator meeting she noted, “The plan was written the way most plans are written... by me, without checking in with people” and explained the need for more open communication with teachers. As a result of the protocol, the School E Instructional Leadership Team re-focused their efforts. Instead of a list of eight separate actions they hoped to take, the ILT narrowed those actions to 3 and created a plan to assess their progress over time.

Since, the revised SIPs were not due to the district until December 16, 2014 and many schools ILT’s met only once a month, we asked all schools to complete the reflection protocol by March 20, 2015. This meant that School E was the only school to complete the protocol at the time of this writing. However, I had conversations with other schools about how they planned to use the protocol. For example, another school (School F) developed an interesting process that attempted to involve as many staff members as possible in an efficient way. The School F principal noted that the SIP is only useful if all the teachers understand it. Therefore, she planned to complete the first step of the reflection protocol (where participants place sticky dots and write notes about whether or not activities were completed and the impact they had) in an all staff meeting. Then, she planned for ILT members to meet at a later time and reflect on the data from all the staff to complete the next steps of the protocol.

If I facilitate the collaborative development of district feedback about SIPs to schools to help them improve the actionability and focus of their SIPs...



In November, I facilitated members of the TLT in giving collaborative feedback to 15 of the 18 schools in CPS using a rubric (Appendix 5). After we sent our feedback

to principals and their leadership teams, we asked them for feedback on the quality and helpfulness of our feedback. Many principals expressed their appreciation for the detail and clarity of the feedback. For example, one principal responded in an email:

The feedback was very clear, we so appreciate the time you each spent and the questions that you asked us will help us to move forward in our process. In the past we did not get specific feedback of this nature and sometimes I (we) wondered if the plan was relevant, if it was clear to others, etc. Your input this go around really is helpful for us to be more focused on the review in January and then at the end of the year. By asking us questions or the “wonderings” [you] help us to think about our plan in a more detailed way.

The feedback also prompted further conversations with principals and their teams about their SIPs. For example, one principal wrote to me, “Thank you for the feedback. It is very helpful and I know what revisions are needed. Would it be possible to discuss the Math aspect of [our] plan?” As a result of that email, I met with that principal for several hours to discuss how to develop an action plan for math at the school.

The data from the SIP survey, shown in Figure 5, demonstrates that all principal respondents stated that it was accurate or somewhat accurate that they received feedback from the district. Furthermore, Figure 6 shows that the feedback helped improve the focus and actionability of SIPs. However, the feedback seems not to have been shared with all teachers because 47% of teachers responded, “I don’t know or Doesn’t apply to me” to the question about whether or not they received feedback from the district on the SIP. (The numbers within the bars in Figure 5, Figure 6, and all subsequent graphs of survey data refer to the number of individuals who provided each response.)

Figure 5: SIP Survey Results, Reception of Feedback from District

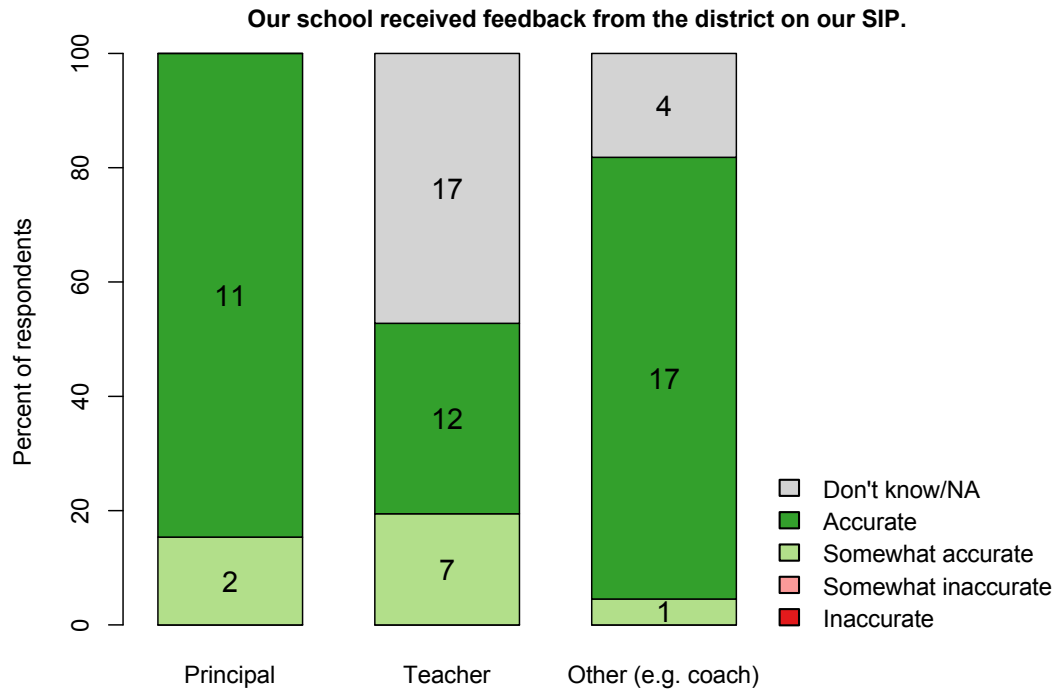
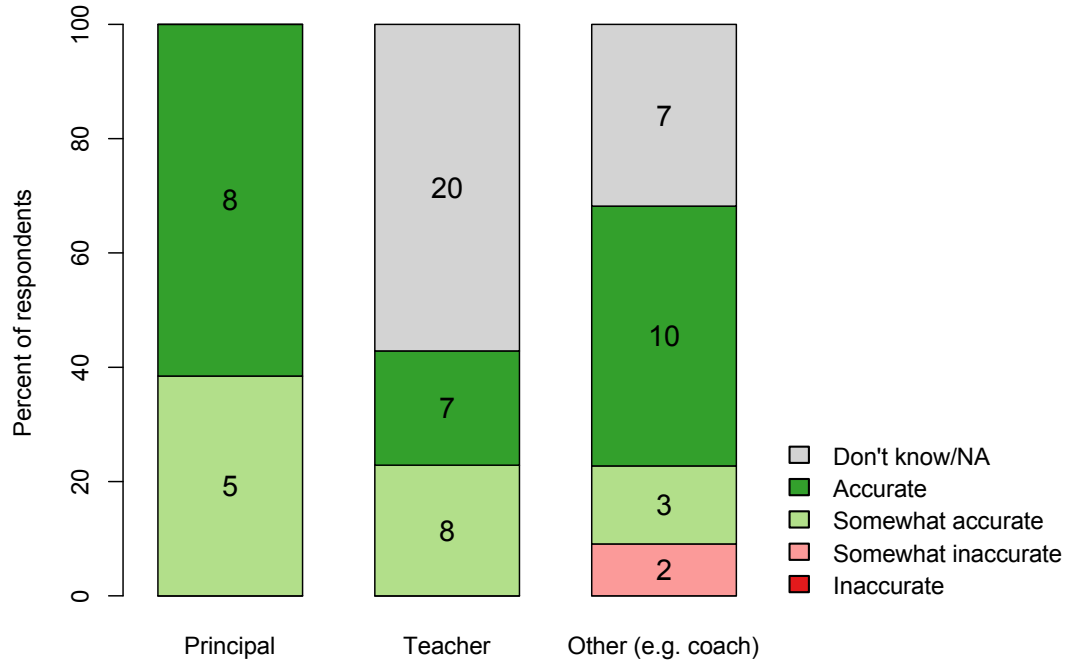


Figure 6: SIP Survey Results, Helpfulness of Feedback

The feedback our school received on our SIP helped improve the focus and actionability of our SIP.



One principal noted in the survey, “This was the first time I got critical feedback on an SIP, and that made a huge impression.”

Other principals, however, were more concerned only about which sections they needed to change for compliance purposes, and how they should be changed. For example, one principal wrote,

I am left with the question-- for whom would I be doing this revision? If it's a 'compliance task,' fine, just tell me that and I'll do it because it's part of my job...
If it's a 'fix this,' tell us specifically how you suggest we do it.

Finally, one principal explicitly rejected our feedback. For example, we wrote on that school's SIP feedback rubric, “Very few of the initiatives target the instructional core. Those that do, such as ‘Tier 1 instructional strategies delivered by coaches’ do not specify how instructional practice will shift to better address the needs of students.” The principal responded by stating,

We are not submitting revisions. In response to your questions, our ILT submits the following... We are confident that our objective regarding academic coaches addresses instructional strategies through our one-on-one coach/teacher meetings and in our weekly grade level/Arts team's Instructional Practices Seminars. Our school-wide focus on grade level Power standards and our monthly school-based department meetings target instructional practices.

According to the state accountability system, this principal leads the second highest performing school in the district at that grade band. As a result, we decided that even if the plan did not seem clear to outsiders, the principal must have developed effective systems and structures for improvement and thus accepted a lack of revisions. We never

discussed on the TLT what would happen if principals refused to submit the revisions we requested, and there were divergent opinions on the matter. I discuss this further in my Analysis section on external accountability.

Another part of my theory of action regarding district feedback on SIPs was that all members of the TLT would work together to develop the feedback. Although all members of the TLT initially agreed to provide feedback to all schools, only three of the six members of the TLT (including myself) were substantially involved in the feedback process. Table 15 shows the number of schools to which each member of TLT participated in giving feedback and an estimate of the total number of hours each individual contributed to the feedback process (specific titles removed for confidentiality).

Table 15: Time Spent on SIP Feedback by Members of the TLT

<i>Title</i>	<i>Number of schools to which provided feedback</i>	<i>Estimated total hours spent on feedback in November 2014</i>
Principal Supervisor #1	15	23.9
Ed.L.D. Resident (me)	15	25.9
Principal Supervisor #2	9	17.8
Other TLT Member #1	5	8.1
Other TLT Member #2	2	3.5
Other TLT Member #3	1	1.5

Table 15 demonstrates that the two members of the TLT who directly supervise principals and I were all substantially involved in the feedback process. The TLT members that directly supervise principals may feel more connected to the SIPs than

other members of the TLT. The other three members of the TLT only gave feedback to 5, 2 and 1 schools, respectively. Each of those three members cited other responsibilities as preventing them from being able to contribute more fully to the feedback process.

There is anecdotal evidence that there was a cost to the uneven participation in the feedback. For example, after the revised drafts of the plans were submitted in December, one member of the TLT noted a specific shortcoming in one school's early evidence of change benchmarks in the SIP based on her unique area of expertise. Since that TLT member was unable to join the feedback meetings for that school, we were unable to provide that feedback to the school before the revisions were submitted.

If I support schools in the school improvement pilot in creating systems to promote the continual use of the school improvement plan and the connection to the instructional core...



Finally, the level of support I provided to the school improvement pilot schools varied substantially across schools. I provided weekly support of a Data Wise cycle on a grade-level team at School A and supported the ILT of School B in engaging in a school-wide Data Wise cycle. I have anecdotal evidence that teachers at these schools made connections to the instructional core. For example, one teacher at School A shared in a reflection after our third meeting together, “[Our work so far] will change how I will teach open response questions... this is a big step in right direction!” At School B, when teachers analyzed their observations of current practice, they realized that although they were providing opportunities for students to write and read, they were providing very few opportunities for students to write *about* reading, which is their stated learner-centered problem. The School B principal stated, “That’s a real ‘aha’ moment” and the rest of the




ILT members nodded in agreement. One School B teacher stated, “We are further along on this process than I thought at first. Now we can get into more specifics around instruction.”

Nevertheless, I was comparatively unsuccessful in providing support to School C and D. It may be important to note that Schools A and B (where I have successfully provided support in linking the SIP to practice) were both classified as “Level 1” schools (the top tier) by the state of Massachusetts. In contrast, School C was a Level 3 school and School D was a Level 2 school. I discuss this potentially suggestive pattern in the Analysis section.

Then statements

Table 16 summarizes the progress made towards the “then” statements in my theory of action. I explain each summary statement in more detail below.

Table 16: Results Summary, Theory of Action “Then” Statements

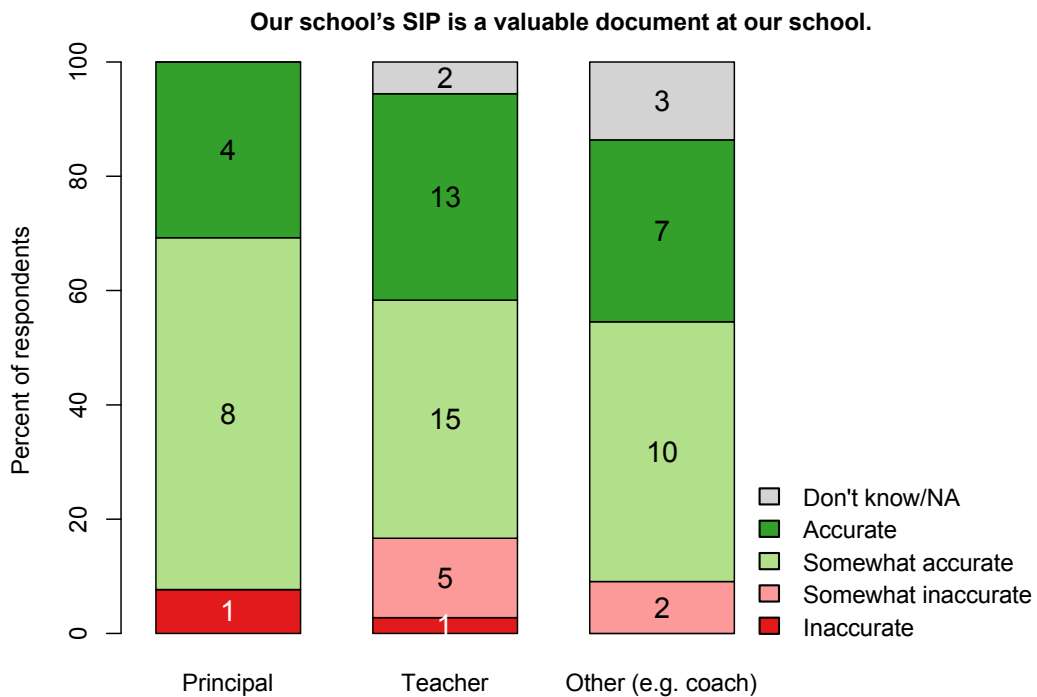
<i>Theory of action short-term “then” statement...</i>	<i>Success to date</i>	<i>“Plus” results</i>	<i>“Delta” results</i>
School leaders, and teachers will be more likely to view SIPs as meaningful documents		<ul style="list-style-type: none"> 75% or more of all respondent groups (teachers, principals, and others) said it was accurate or somewhat accurate that the SIP is a valuable document and they know what is written in it 	<ul style="list-style-type: none"> It is not possible to know how much an improvement this result is over previous years Approx. 40 – 60% of each group said only somewhat accurate that SIP is valuable
Principals and ILTs will continually revise their improvement plans and processes based on evidence and feedback (thus moving from a “plan” to a “process”)		<ul style="list-style-type: none"> Survey respondents said SIP was revised an average of 4.1 times this year All principals and almost all others (e.g. coaches) said it was inaccurate or somewhat inaccurate that the SIP “sits on the shelf” The one school that had used the reflection protocol by time of survey had positive experiences in shifting from a plan to a process 	<ul style="list-style-type: none"> 30% of teachers said it was somewhat accurate that the SIP “sits on the shelf” As of February 2015, most schools had not yet completed the SIP reflection protocol
Strategies embedded in the school improvement plans will be put into action in schools and classrooms		<ul style="list-style-type: none"> 60% of principals and others (e.g. coaches) said this year’s SIP process is more likely to improve teaching and learning than last year’s process 75% or more of principals and teachers said the initiatives in the SIP will improve what students learn 	<ul style="list-style-type: none"> Only 25% of teachers said this year’s SIP process is more likely to improve teaching and learning than last year’s process (70% said equally likely)

Then school leaders, and teachers will be more likely to view SIPs as meaningful documents.



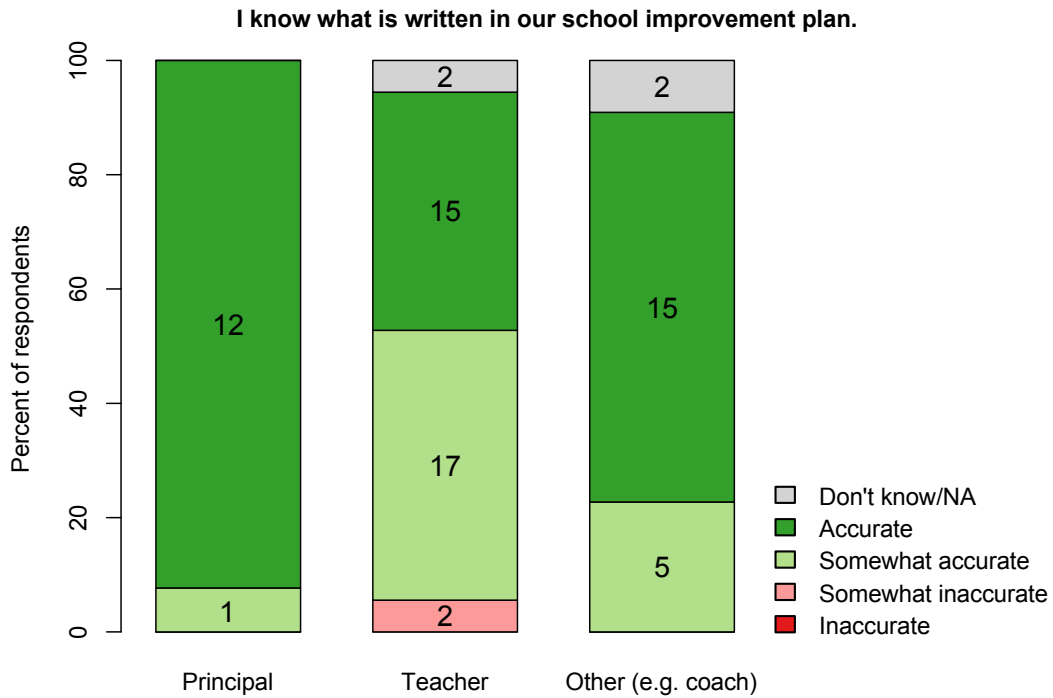
In every group (principals, teachers, and others), over 75% of respondents said it was somewhat accurate or accurate that their school's SIP was a valuable document (Figure 7). However, sizable percentages (40 – 60%) of each group reported that it was only somewhat accurate that the SIP was a valuable document.

Figure 7: SIP Survey Results, Valuable Document



In addition, at least 85% of respondents from every group reported that it was accurate or somewhat accurate that they knew what is written in their SIP, although principals were more likely to state that it was accurate than only somewhat accurate (Figure 8).

Figure 8: SIP Survey Results, Know What is Written in SIP



Since these questions were not given to the same groups in previous school years, however, it is not possible to know whether these findings represent an improvement over previous years.

Principals and ILTs will continually revise their improvement plans and processes based on evidence and feedback (thus moving from a “plan” to a “process”)



All respondents reported revising their SIP an average of 4.1 times during the 2014 – 2015 school year (Table 17). This average, however, conceals differences across respondent groups. Principals reported revising their SIP approximately twice as many times as teachers or others (e.g. coaches), suggesting that principals were more involved in the revision process than their staff.

Table 17: SIP Survey Results, Average # Times SIP Was Revised

<i>Respondent Group</i>	<i>Average # Times SIP Revised</i>
Principal	6.2
Teacher	3.3
Other (e.g. coach)	3.3
Grand Total	4.1

In addition, 85% of principals reported that they used feedback from the district to revise their SIPs (data not shown). In contrast, only 28% of teachers and 59% of others (e.g. coaches) reported that they used feedback from the district for revisions, though 47% of teachers and 32% of others (e.g. coaches) said that they did not know what was used to revise the SIPs or if they were revised at all.

The revised SIPs that schools submitted to the district provide further evidence that schools used the feedback from the district in their revisions. For example, School C had an unfocused action plan in its initial draft that included:

Table 18: School C SIP Action Plan (Excerpt), *First Draft*

Year-long description, rationale, and goal	Developing building based norms for classroom and hallway expectations, clarity, engagement, instructional strategies, and learning experiences
Priority Strategic Objective/Initiative:	Building a collaborative culture to support improved instruction
Data that supports this initiative as a priority for your school:	School C math teachers were consistently struggling to maintain pace with curriculum and standards. Teachers report struggles with covering all standards due to being behind on the pacing guide.
Student outcome at end of school year:	Classroom performance/participation increases. This will be evident in overall student GPAs.
Early Evidence of Change	
What are you trying to achieve in this initiative by Dec. 31?	January report cards will evidence an increased average GPA of 10%
How will you know if a change is an improvement by Dec. 31?	Classroom observations, school-wide walkthroughs, memos, and cross-disciplinary district-led site visits

The feedback from the district to School C included, “I don’t think GPA is tightly aligned to the goal of building a collaborative culture in classrooms -- I think observations of classrooms with particular focus areas would be more aligned.” Furthermore, our collaborative feedback conversations revealed that the principal of School C had already begun helping teachers increase their writing of mastery objectives in every classroom, but that goal was not in the initial draft of the SIP. Therefore, we also added to our feedback, “How can the work on objectives can be folded into this plan?” In response to this feedback, the SIP was revised to include an action plan more focused on mastery objectives:

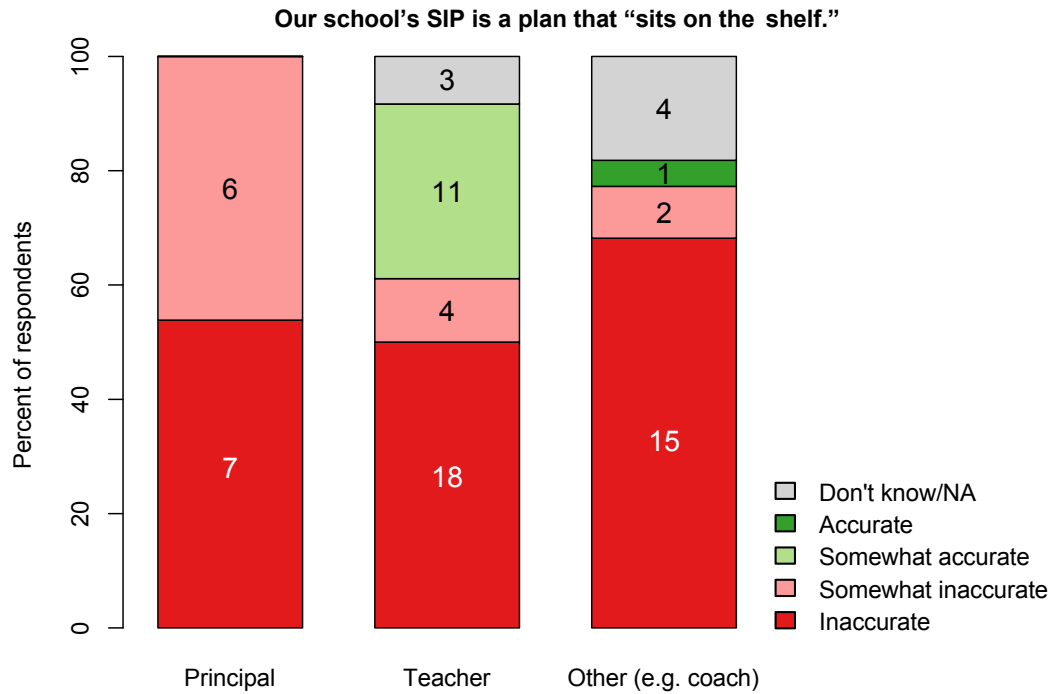
Table 19: School C SIP Action Plan (Excerpt), *Second Draft*

Year-long description, rationale, and goal	Develop school-wide systems that encourage instructional practices that promote student learning and engagement.
Priority Strategic Objective/Initiative:	Lessons have mastery objectives that are clearly displayed and aligned to classroom tasks. Ensure that staff is aware of the difference between student compliance and engagement.
Data that supports this initiative as a priority for your school:	SGPs for all students were 38 and below (see Part 1, Areas for Improvement #5).
Student outcome at end of school year:	SGPs will increase to 50-60 as a result of aligned mastery objectives that are aligned to tasks. Student participation will be active engagement rather than compliance.
Early Evidence of Change	
What are you trying to achieve in this initiative by Dec. 31?	At least 50% of classrooms will have mastery objectives that are aligned to tasks.
How will you know if a change is an improvement by Dec. 31?	Classroom observations, school-wide walkthroughs, memos which share data with staff, and cross-disciplinary district-led site visits.

Although feedback from the district was clearly used by schools in the revision process, there is less evidence that schools were able to use early evidence of change data to revise their plans. Only two principals (of the 13 who responded) stated that they used early evidence of change data to revise the SIP (data not shown). Although it is impossible to know which principals responded this way because principals were not identifiable by school, it is possible that one of the two principals who used early evidence of change data was the principal of the one school that had completed the SIP reflection protocol by the end of January. Nevertheless, I expect that as more schools use the reflection protocol, a greater proportion will have used early evidence of change data to revise their plans.

Finally, even before most schools used the reflection protocol, all principals and nearly all other (e.g. coaches) said it was inaccurate or somewhat inaccurate that the SIP “sits on the shelf.” Although 61% of teachers agreed, 31% of teachers responded that it was somewhat accurate that their school’s SIP “sits on the shelf,” and thus the SIP was not used as part of an ongoing improvement process (Figure 9).

Figure 9: SIP Survey Results, Sit on Shelf



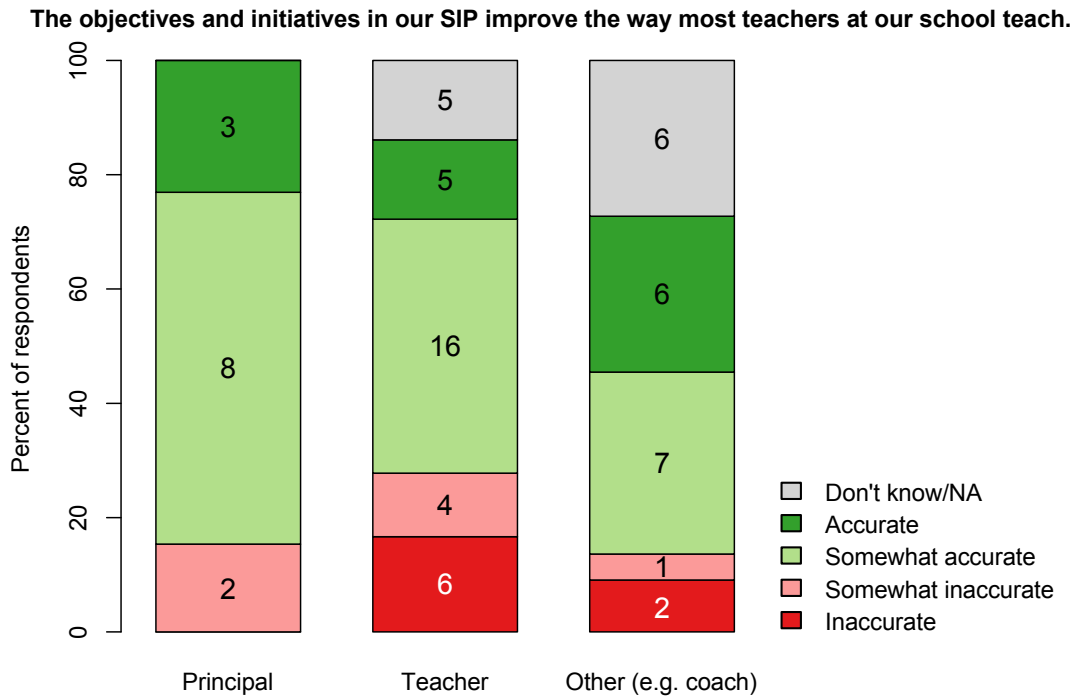
Then strategies embedded in the school improvement plans will be put into action in schools and classrooms



Anecdotal evidence suggests that at Schools A and B, strategies from the SIPs were put into action through the Data Wise Process (see “If” section above). For example, a teacher at School A noted that she changed the way she teaches open response problems as a result of the data meetings.

Across the rest of the district, however, there was disagreement among respondent groups about the likelihood that the strategies in the SIPs would impact instruction. Although 85% of principals stated that it was accurate or somewhat accurate that the objectives and initiatives in the SIP would improve the way most teachers teach, only 58% of teachers and others (e.g. coaches) agreed (Figure 10).

Figure 10: SIP Survey Results, Improve Teaching



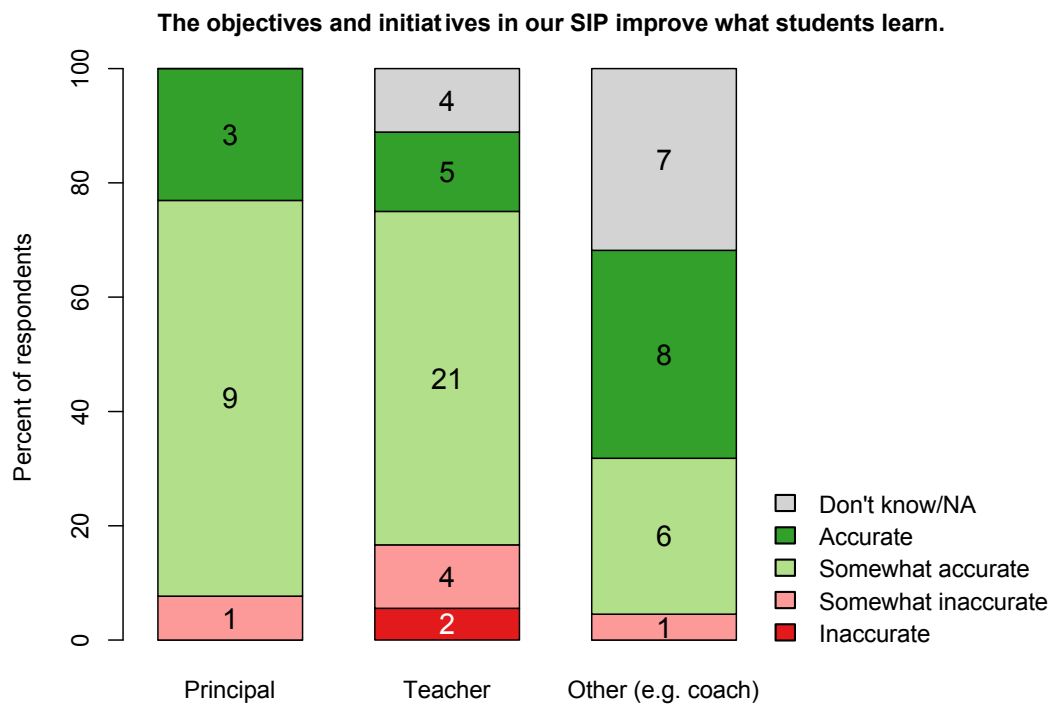
In all cases throughout the survey, it is possible that principals were painting a more positive picture of the SIP because they developed positive relationships with me and wanted to support me. For example, it is possible that the two principals (of 13 respondents) who said it was “somewhat inaccurate” that the strategies in the SIP improve the quality of teaching in Figure 10 shared a more honest picture than those who said it was accurate or somewhat accurate.

There are many alternative explanations, however, for why those two principals stated that the SIP was unlikely to improve the quality of teaching and learning. First, there could have been other strategies in their schools that were so powerful for improving instruction that, by contrast, the SIP seemed insignificant. Conversely, the principals could have written action steps in the SIP that they knew were impossible to implement, but included anyway to complete the SIP as an exercise in compliance.

Finally, they could have believed that the strategies in the SIP were useful, but that those strategies were still unlikely to move the needle on the quality of teaching and learning. Since the responses to the survey were anonymous, and no clarity was raised in the open response sections of the survey, it is difficult to know which of these explanations is more accurate.

Respondents were somewhat more optimistic, however, that the strategies in the SIPs would lead to improvements in student learning (Figure 11).

Figure 11: SIP Survey Results, Improve Student Learning

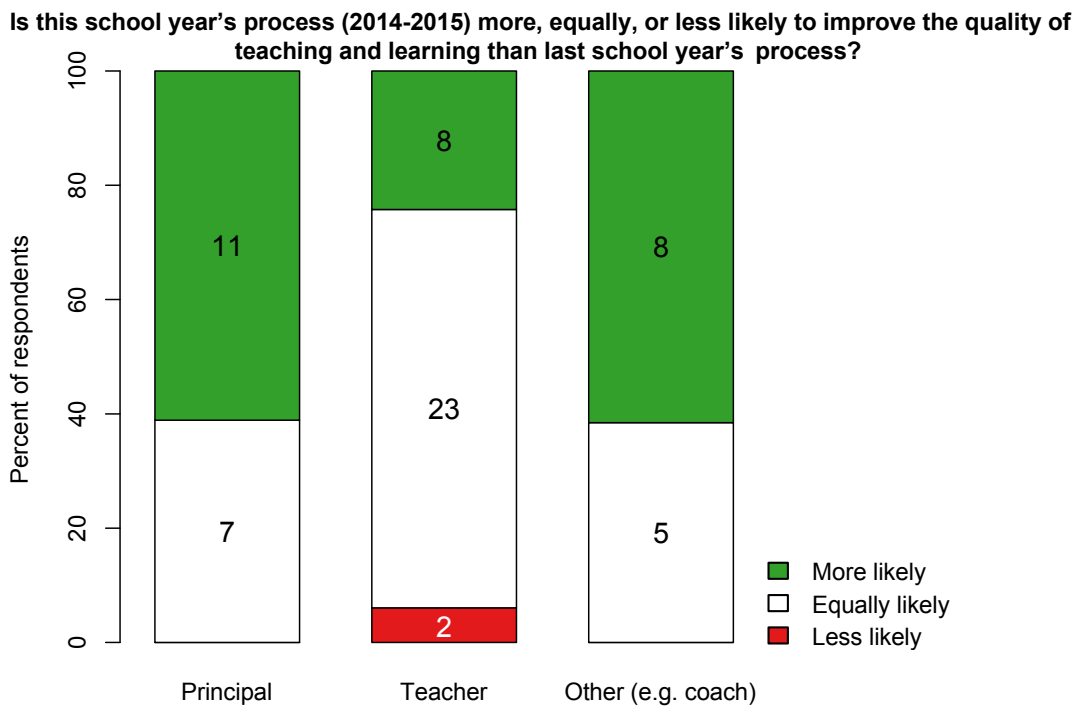


Many survey respondents shared specific ways in which the SIP was improving the quality of teaching and learning at their school, including one other (e.g. coach) survey respondent stating, “[Professional development is] closely linked to SIP goals [and there is] a school wide emphasis on one specific ELA goal, leading to more consistency in instruction across grades.” A principal respondent wrote, “Our main

initiative for this year, Habits of Mind, is really taking root. I see evidence in every classroom. I don't think this would have happened without the action planning process.”

In addition, 50 – 60% of principals and others (e.g. coaches) reported that this year's SIP process was more likely to improve the quality of teaching and learning than in previous years. However, only 25% of teachers agreed. I discuss the disconnect between principal responses and teacher responses in the Analysis section.

Figure 12: SIP Survey Results, Improvement Over Last Year's Process



To identify which aspects of the new SIP process respondents felt were most likely to improve teaching and learning, I coded all the open response text that was submitted for this question. The most frequently reported reasons for improvement are included in Table 20.

Table 20: SIP Survey Results, Improvements to This Year’s Process

<i>Codes for aspects of this year’s SIP process that make it <u>more</u> likely to improve teaching and learning</i>	<i>Frequency</i>
More involvement and collaboration	10
Fewer areas of focus allow more targeted efforts.	8
More of a process: assessment and adjustment based on early evidence of change benchmarks	7
School-specific actions based on strategies in SIP	4
Formatting of document more accessible	4
Feedback from district was valuable	2

One teacher respondent stated that an improvement to this year’s process was “There were more opportunities for staff to contribute to the SIP, not just the ILT and select teachers. I appreciated helping develop measures for which we can determine if certain goals were being accomplished.” One principal wrote, “Fewer areas of focus allow more targeted efforts.” One other (e.g. coach) wrote, “I think the formatting of the actual document (SIP) has made a big difference this year. The readability and presentation of data, goals, benchmarks, etc. makes it less overwhelming and more accessible for staff.” Finally, a principal wrote, “The conscious addition of early evidence of change benchmarks [is] helping us monitor, assess, and adjust our work around teaching and learning.”

Despite these improvements in the SIP process, many barriers remained to using SIPs to improve the quality of teaching and learning. My codes for the question about barriers reveal that the lack of time for involving staff and providing professional development was the most commonly cited barrier (Table 21).

Table 21: SIP Survey Results, Barriers to Using SIPs to Improve Learning

<i>Codes for the biggest barriers to using School Improvement Plans to improve the quality of teaching and learning</i>	<i>Frequency</i>
Not enough time for staff involvement/PD	18
There are too many initiatives from the district	4
Too many goals to address	3

For example, one principal wrote, “The amount of time it takes to create the plan with deadlines doesn’t allow for timely and significant collaboration that would inform aspects of the plan’s creation and subsequent follow up.”

Codes for the question about aspects of this year’s process that make it *less* likely to improve the quality of teaching and learning reveal similar patterns (Table 22).

Respondents cited a lack of involvement among staff and a timeline that was confusing and too late as ways that this year’s process was *less* likely to improve teaching and learning than last year’s process.

Table 22: SIP Survey Results, Challenges of This Year’s Process

<i>Codes for aspects of this year’s SIP process that makes it less likely to improve teaching and learning</i>	<i>Frequency</i>
Not enough staff involved in creating and reviewing SIP	6
Timeline was confusing and too late	5
Teachers are too overwhelmed with too many initiatives	3
Not enough coaching to link SIP to instructional practices	2
Document is too long	2

For example, one other (e.g. coach) respondent wrote, “The SIP was primarily written and revised in isolation by our Principal and Assistant Principal. Teachers provided almost no meaningful input/feedback, and even our ILT only had very limited opportunities to provide input/feedback. Opportunities for ILT to provide input/feedback were almost exclusively ‘last minute’ – often on the very day that a document was due.”

One principal wrote, “Timing. At times things are getting written and need to be addressed after the SIP budget is due. What happens is that the SIP is written to match the SIP budget, which begins in February... it’s kinda backwards.” Finally, a teacher wrote, “It’s a big document. Teachers don’t have time to internalize all that is in the SIP.”

Analysis of Strategic Project

Introducing my Analytic Framework

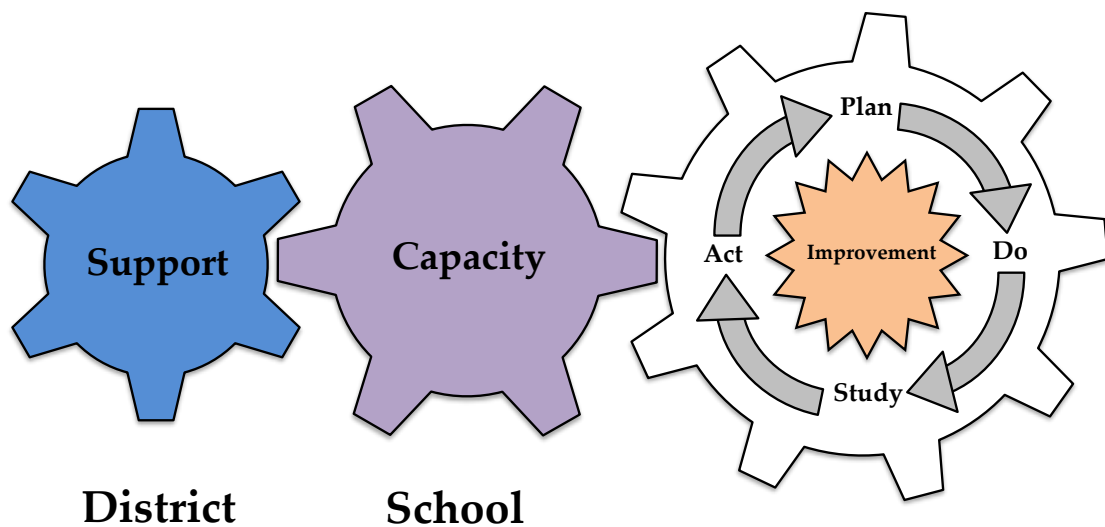
My experience in my strategic project suggested to me that while the theory of action that I developed in September 2014 accurately captured several important aspects of making SIPs useful for schools, I neglected several other critical aspects. Most importantly, I realized that I overlooked the significance of accountability, both “internal accountability” and “external accountability,” each of which I define below. I also overlooked the importance of differentiating district-level actions based on the unique needs of individual schools. Here, I describe how I used additional findings from the literature (that I missed when I conducted my Review of Knowledge for Action), as well as some of my results in Cambridge to inductively develop a new analytic framework. I then use this new framework to analyze the results of my project.

The core of the analytical framework is the Plan, Do, Study, Act (PDSA) cycle as the driver of improvement. Cyclical improvement processes have been both theorized and demonstrated to lead to improvement (e.g. Boudett et al., 2013; Kaufman et al., 2012; Langley, 2009). Although PDSA cycles may not be the *only* way to drive improvement, it is difficult to imagine significant improvement without either a formal or informal cycle of planning, acting, and assessing.

The theory of action I developed in October 2014 was aimed at shifting from a static plan to an ongoing process of improvement cycles. It included four actions I hoped to lead: 1) improving SIP templates to focus on shorter-term outcomes and actions, 2) facilitating reflection on those outcomes, 3) developing feedback to schools about SIPs, and 4) developing additional supports for the pilot schools. All four of those actions were

forms of support to schools in Cambridge. I define “support” as actions that are taken to build the capacity of stakeholders in a system. Providing schools with improved tools (templates), processes (reflection protocols), and feedback, are all ways to increase the capacity of school-based staff. Therefore, my initial theory of action can be summarized in Figure 13, which illustrates district-level support driving school-level capacity to drive on-going cycles of improvement.

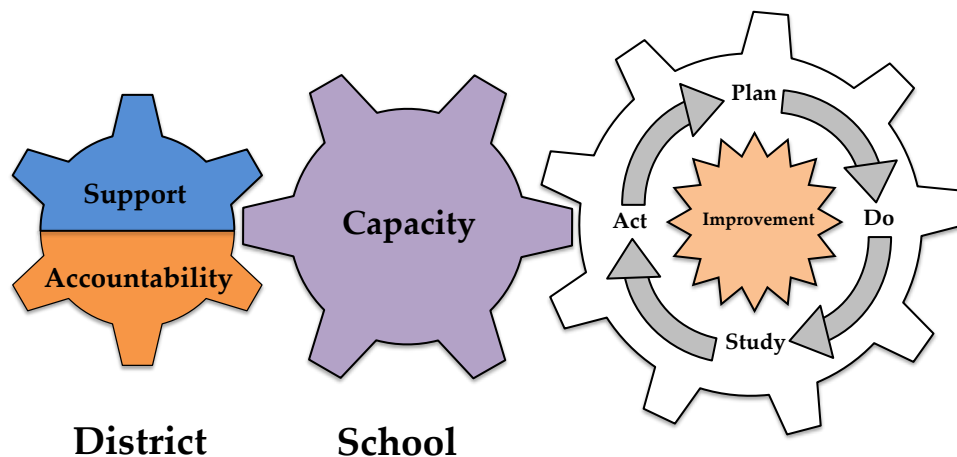
Figure 13: *Initial Theory of Action Summarized*



To define “capacity,” I use HGSE Professor Richard Elmore’s conception of “capacity to perform,” defined as “the development and deployment of knowledge and skill” to produce performance (Elmore, 2006, p. 2). In addition to knowledge and skill, I believe capacity also includes the time needed to apply that knowledge and skill. In my analytic framework, I therefore distinguish between “capacity,” which is the knowledge, skill, and time that exist at any given point in time among any stakeholder group to drive improvement cycles, from “support,” which are the actions that are taken to increase that capacity.

Over the course of my project, I became aware that my theory of action was missing an important component: accountability. Elmore coined the “principle of reciprocity,” which states that every ounce of accountability needs to be coupled with an equal ounce of support (Elmore, 2006). He was writing to explain the shortcomings of the federal No Child Left Behind (NCLB) law, which was signed into law in 2002 and although Massachusetts received a flexibility waiver from NCLB in 2012, the law remains influential in 2015. NCLB required states to increase accountability based on annual assessments of student learning. Elmore argued that the law was flawed because it increased accountability without simultaneously building capacity. He writes, “accountability systems as they are currently constructed do little or nothing to support the learning that is critical to their success” (Elmore, 2006, p. 25). I currently believe that the opposite flaw was present in my initial theory of action for SIPs: I outlined many ways to provide support (redesigned templates, opportunities to reflect, development of feedback, and support structures), but did not include any ways to increase accountability for utilizing that support. Therefore, my initial theory of action should have included accountability in addition to support at the district-level, as illustrated in Figure 14.

Figure 14: *Initial Theory of Action with Accountability*



Other education leaders agree that accountability systems should be tightly coupled with support to build capacity. Jim Liebman, former Chief Accountability Officer in the New York City Department of Education (NYCDOE), stated, “If we want the lever of accountability to be as powerful as possible, we have to provide ways for schools to build their capacity to be relatively self-sufficient in evaluating themselves every day” (Childress & Clayton, 2008, p. 5). In fact, reforms in the NYCDOE in 2007 - 2008 provide a useful example in illustrating how accountability and support can exist simultaneously to drive improvement. Accountability systems in NYCDOE at the time included annual Quality Reviews in which external reviewers evaluated each school using a rubric, and annual Progress Reports in which schools were given a letter grade in the areas of school environment, student performance, and student progress. Schools that received low grades on the Progress Reports and poor Quality Review ratings faced a series of consequences, including the possibility of principal removal and school closure.

At the same time, NYCDOE developed supports for improvement processes in schools. First, each school developed an “inquiry team” that used the Scaffolded Apprenticeship Model (SAM), described in my Review of Knowledge for Action section (Talbert, 2011). Second, the department developed a new data system called the “Achievement Reporting and Innovation System” to make it easier for schools to analyze student achievement data to drive improvement. Finally, Liebman created a new role called the senior achievement facilitator who would not supervise principals, but rather provide support in using the new tools, as well as professional development to support the inquiry teams (Childress & Clayton, 2008).

It is important to note that district leaders are not the only stakeholders who can play an accountability role in schools. In fact, Elmore (2006) specifically describes the Cambridge Public Schools as a case study in different types of accountability. He argues that, prior to performance-based accountability (e.g. MCAS), parents played an accountability role in CPS because they were active choosers of schools among a range of options through the Controlled Choice process. Elmore argues that the state assessment accountability system displaced the parent-driven accountability system that existed previously.

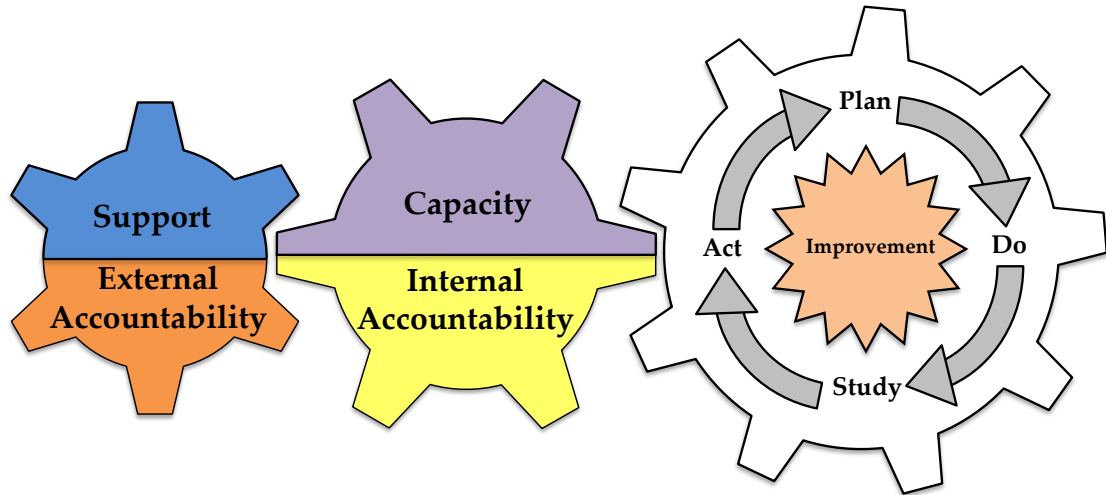
In all of these examples of accountability, actors outside the school (i.e. district leaders, external reviewers, parents) were holding schools accountable for their performance. This corresponds to Elmore's concept of "external accountability" that involves measuring performance and coupling those measurements to rewards and/or sanctions, or more generally feeling accountable to a stakeholder that is external to the system (Elmore & Fuhrman, 2001).

External accountability is distinct from "internal accountability," which Elmore defines as "a high level of agreement among members of the organization on the norms, values, and expectations that shape their work" (Elmore, 2004, p. 134). Elmore describes research that suggests that schools with higher levels of internal accountability are connected to greater success in the presence of external accountability demands (Elmore, 2005). Canadian education researcher Michael Fullan agrees, writing, "External accountability does not work unless it is accompanied by development of internal accountability" (Fullan, 2007, p. 60). Oakes, Quartz, Ryan, & Lipton (2000) describe their studies in schools and write, "Unless [teachers] were bound together by a moral

commitment to growth, empathy, and shared responsibility, they were as likely to replicate the prevailing school culture as they were to change it.” Additionally, in his dissertation on the WSIP in BPS, Buffet (2005) explains the importance of internal accountability and capacity on school improvement plans in particular, writing, “For school planning to support systematic instructional improvement and increased student learning, it must either mobilize existing school capacity and/or explicitly develop internal accountability” (p. 18).

Therefore, my initial theory of action should also include the notion of “internal accountability” in addition to “external accountability.” Figure 15 summarizes the existing research for driving improvement cycles and becomes the analytic framework I use to analyze my results. The first gear demonstrates two types of actions that external stakeholders can take: creating external accountability and providing support. As Elmore notes, these two forces should be balanced. However, the external accountability and support will not be effective unless they drive the second gear of internal accountability and capacity for engaging in improvement processes. There must be a close fit between the types of external accountability and support and the existing capacity and internal accountability of the organization. For example, if a school community is held externally accountable for conducting an improvement process and supported to build their skills in using that process, but if the school does not have the existing capacity of time in the day to do that process, then the support and accountability do not fit the existing capacity. Finally, the capacity and internal accountability can be leveraged to drive the Plan, Do, Study, Act cycles that drive improvement.

Figure 15: Analytic Framework



I want to clarify that although external accountability and internal accountability are connected in my analytic framework (Figure 15), it is not necessarily true that external accountability can or will build internal accountability. The assertion in the analytic framework is that external accountability is unlikely to be successful without sufficient internal accountability. Elmore (2006) argues that increasing the external accountability (such as through testing and sanctions) on an organization with *low* internal accountability does not increase the internal accountability of the organization. Rather, he notes, the increased external accountability “often makes the organization more atomized and dysfunctional” (Elmore, 2006, p. 22). Conversely, increasing external accountability on an organization with *high* internal accountability can make the organization even more coherent. Therefore, internal accountability may drive the impact of external accountability rather than the other way around. In certain situations, however, external accountability may play a role in building internal accountability, such as in mandating the SIP reflection protocol, which I discuss in my analysis of school-level internal accountability (finding #3, below).

Inherent in this discussion is the fact that the internal accountability of schools varies substantially from one school to another. Elmore (2006) describes wide variations in the internal accountability of schools in Boston and thus “dramatically different responses across individual schools to the district’s overall improvement strategy” (Elmore, 2006, p. 30). Similarly, many researchers have described the variability of schools’ capacity to improve and the impact of that variability on the effects of system-level reforms. For example, Bryk, Sebring, Allensworth, Luppescu, & Easton (2010) describe the patterns in improvement among over 400 elementary schools in the Chicago Public Schools from 1990 to 1996. Despite all being subject to the same change in policy (the Chicago School Reform Act of 1988), Bryk et al. identified specific school-level attributes that were more frequently present in the schools that achieved the greatest improvement and more frequently absent in schools that declined or did not improve at all. Described through the lens of my analytic framework, schools in Chicago varied in their capacity to improve. Similarly, Spillane (1998) describes the variety of factors (e.g. organizational structures and professional specializations of staff) that cause individual schools and districts to respond quite differently to the same change in state policy.

Therefore, my analytic framework (Figure 15) should not be taken as one-size-fits-all. Rather, the external accountability and support that the district provides should be individually tailored to the internal accountability and capacity of each school in the district. The importance of differentiating support and external accountability by school is another factor that I did not take into consideration in designing my initial theory of action.

Finally, although external accountability plays a significant role in this analytic framework, it is important to consider that too much external accountability could reinforce the view of SIPs as compliance documents. Nevertheless, I propose that if schools are provided the support and external accountability for *using* the SIPs rather than just writing them, and if they develop greater internal accountability and capacity, then they can shift from a plan to a process.

In the following section, I apply my analytic framework (Figure 15) to the results of my strategic project.

Analysis of Results:

In general, the results of my project demonstrate that principals, teachers, and other school instructional staff reported many improvements in the SIP process. Most principals and others (e.g. coaches) stated that this year's SIP process is more likely to improve teaching and learning than last year's process. In addition, about 75% of all survey respondents said the SIP was a valuable or somewhat valuable document and nearly all principals and other (e.g. coaches) said the SIP does not "sit on the shelf." I believe these improvements are the result of the "if" statements in my initial theory of action: helping schools develop shorter-term outcomes, providing them a process to reflect on those outcomes, and giving them feedback on their SIP drafts.

Nevertheless, the evidence in the Results to Date section suggests that the SIP is still not consistently improving daily teaching and learning in classrooms. I apply my analytic framework to explain both the improvements and shortcomings of my initial theory of action. My analysis can be summarized in six main findings:

1. The district's *support* systems increased schools' capacities in writing higher quality SIPs with shorter-term outcomes, but the support systems have not yet built sufficient capacity for school teams to use the SIPs.
2. The district's *external accountability* systems also focused on writing a high-quality SIP rather than on mobilizing existing capacity and internal accountability in schools to use the plan in an on-going process of improvement.
3. Although the Data Wise Process may have continued to build internal accountability at Schools A and B, the district has not yet intentionally built internal accountability at other schools across the district.
4. Schools varied in their capacity and internal accountability and the support and external accountability were not differentiated to meet their unique needs.
5. The district leadership has not yet built internal accountability of its own for engaging in improvement processes.
6. I personally struggled to build internal accountability at the district level because of my own assumptions about my legitimacy.

1. The district's support systems increased schools' capacities in writing higher quality SIPs with shorter-term outcomes, but the support systems have not yet built sufficient capacity for school teams to use the SIPs.

Table 23 summarizes all the district-level support we provided to schools for writing, revising, and using their SIPs. It is likely that schools received additional support from various other stakeholders, especially including their principals' supervisors (Deputy Supt. or Asst. Supt. for Elementary Education) as well as other consultants or

professional development providers. However, those additional sources of support were somewhat idiosyncratic and were not systematized across the district.

Table 23: District-level sources of support for engaging in PDSA cycles with SIPs

<i>Date</i>	<i>Description of support</i>	<i>Target of support</i>	<i>Duration</i>
8/21/14	<u>Training</u> in using data to do root cause analysis; peer feedback on alignment of SIP plan overview to data analysis.	Principals and district-level curriculum coordinators	6 hours
9/12/14	<u>Training</u> in how to use SIP Action Planning template; practice with identifying short-term outcomes	Principals and district-level curriculum coordinators	3.5 hours
10/17/14	<u>Time</u> to work on SIPs with ILT members during Admin Meeting.	Principals and some ILT members.	3 hours
11/14	<u>Feedback</u> from some TLT members on first draft of SIPs using a rubric.	Principals and some ILT members.	varied

Table 23 demonstrates a total of approximately 9.5 hours of training, in addition to 3 hours of work time provided to instructional leadership teams and feedback to school leadership teams on their SIPs. On one hand, these support structures improved the capacity of school teams in writing higher quality SIPs than before. This year’s SIP process included the first systematized feedback process from the district to schools about their SIPs. In addition, we supported school leadership teams in writing short-term outcomes in SIPs, something that had not happened in the past and is a critical component to engaging in improvement processes.

Most respondents in every group said it was accurate or somewhat that the support for writing the plan and using the plan was sufficient (Figure 16 and Figure 17). On the other hand, however, there were many respondents who disagreed or were uncertain that support was sufficient. Three of the 13 responding principals said it was either inaccurate or somewhat inaccurate that the support for both writing the plan and for

using the plan was sufficient (Figure 16 and Figure 17). In addition, most teachers and others (e.g. coaches) reported “I don’t know” for the sufficiency of support.

Figure 16: SIP Survey Results, Support for Writing the SIP

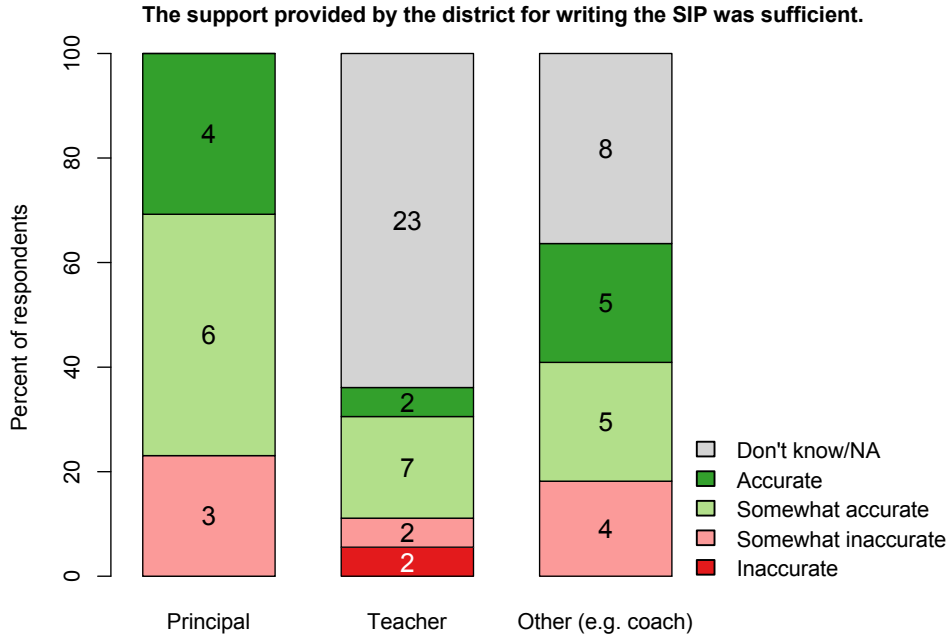
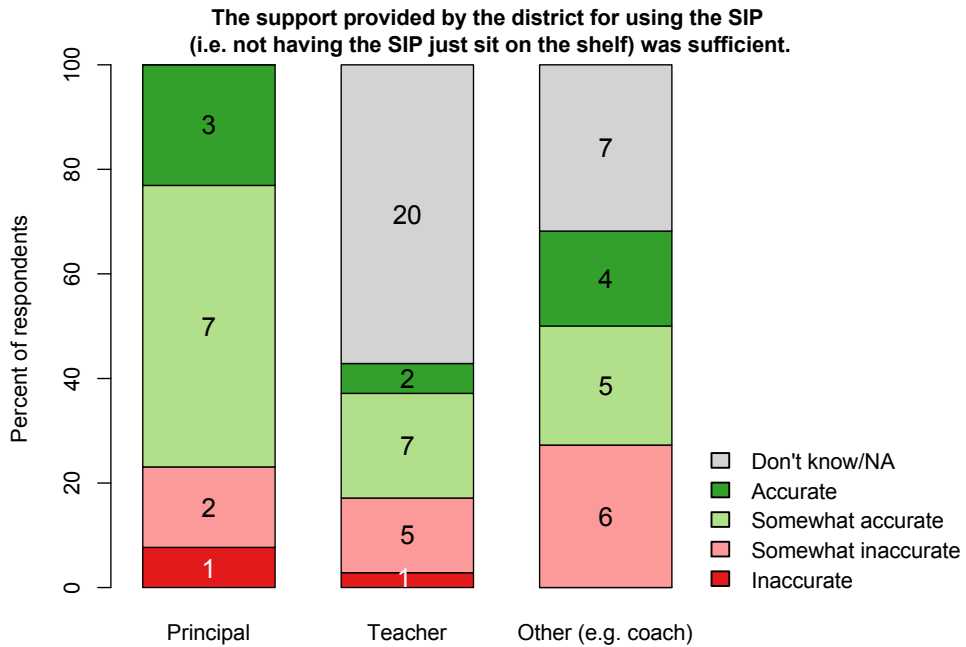


Figure 17: SIP Survey Results, Support for Using the SIP



Perhaps most importantly, the support provided was mostly targeted at *writing* a high-quality SIP rather than at building school instructional staff's capacity in *using* the SIP in a continuous improvement process. Although we gave principals a protocol for reflecting on progress in their SIP, we did not practice the protocol or provide any additional training in using it. Our focus on supporting schools in writing or revising the SIP could have reinforced the focus on a plan instead of a process.

Additional ways that we could have provided support to build educators' capacities in using the SIP in a continuous improvement process include helping them learn to:

- Analyze the vast sources of data to which schools have access in order to identify specific areas for school improvement
- Connect analysis of student learning data to evidence of current instructional practices
- Identify a specific “learner-centered problem” and adult “problem of practice”
- Identify specific ways to assess short-term progress
- Connect the goals in the SIP to the school budget process and educator evaluation goals, both of which occur on different timelines from the SIP

We also did little as a district to increase the amount of time that principals and their school staff have for using the SIP; the only additional time we provided was three hours for principals to work with ILTs during the October 17 administrator meeting. One principal survey respondent noted that a barrier to using the SIP to improve practice was “Too many initiatives/reactive responses/demands on the district level that pull us and our staff away from what is in our individual SIP.” We never reduced the amount of time

that schools need to spend on other district initiatives and, thus, schools were not able to consistently add additional time to these new ways of using the SIPs. In other words, there may have been greater external accountability for priorities besides the SIP process.

The support I provided to school improvement pilot Schools A and B, however, was greater than the support provided across the district. At Schools A and B, I provided many of the types of support that I named as missing from the district-wide support structures through the Data Wise Improvement Process. Even at these schools, though, I was unable to support them in reducing the time spent on other district initiatives or in connecting the goals in the SIP to the school budget and educator evaluation processes.

2. The district's external accountability systems also focused on writing a high-quality SIP rather than on mobilizing existing capacity and internal accountability in schools to use the plan in an on-going process of improvement.

The concept of external accountability was not present in my initial theory of action for improving the SIP process in Cambridge. As a result, we did not carefully consider our external accountability systems, and those that did exist focused on writing a high quality SIP, rather than using it in an improvement process. The external accountability that existed for SIPs is summarized in Table 24.

Table 24: Summary of Forms of External Accountability for SIPs in CPS

<i>Accountability for what?</i>	<i>Accountability to whom?</i>	<i>Communicated how?</i>
Completing first and final drafts of the plan.	Deputy Superintendent and Asst. Supt. of Elementary Education	Repeated email reminders and phone calls
Completing SIPs that are high quality	Deputy Superintendent and Asst. Supt. of Elementary Education; School Committee	Feedback through rubric with specific scores for “revision needed”; Submission of SIPs to School Committee
Conducting reflection protocols on short-term goals	Deputy Superintendent and Asst. Supt. of Elementary Education	We asked schools to complete the reflection protocol by March 20, but it was unclear if all schools would meet that goal
Meeting the goals in SIP	Deputy Superintendent and Asst. Supt. of Elementary Education	Some principals have connected their SIP goals to their evaluations as principals

Principals agreed that they are accountable for ensuring that their SIP is written and of high quality (Figure 18 and Figure 19). The SIP rubric may have helped clarify the district’s definition of quality in SIPs.

Figure 18: SIP Survey Results, Accountable for *Writing* SIP

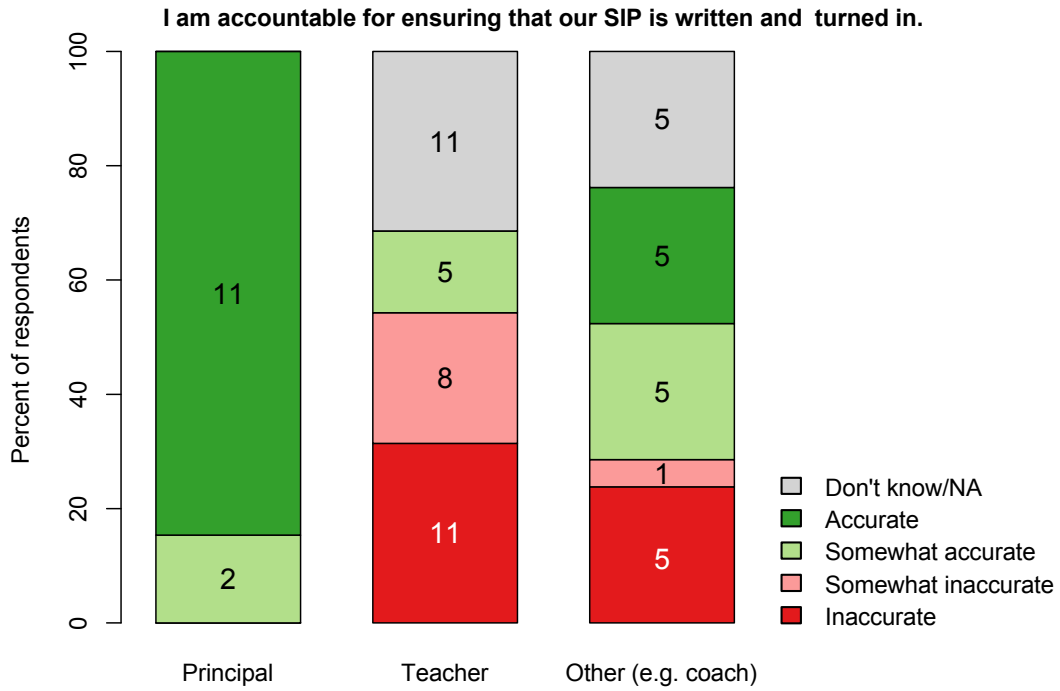


Figure 19: SIP Survey Results, Accountable for *Using* SIP

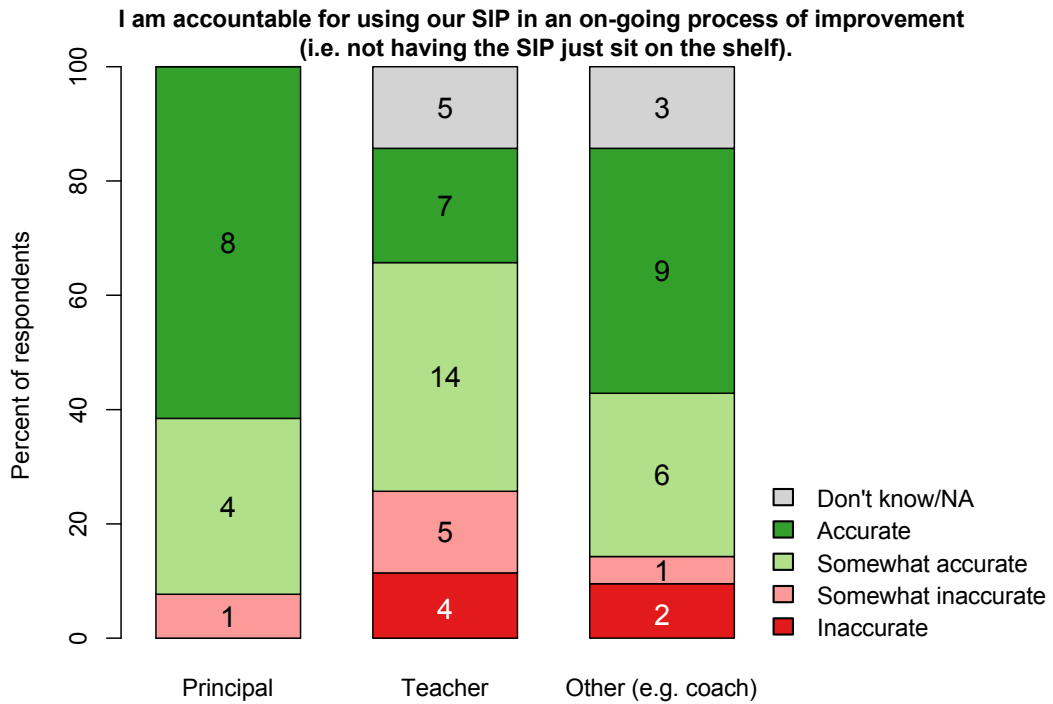


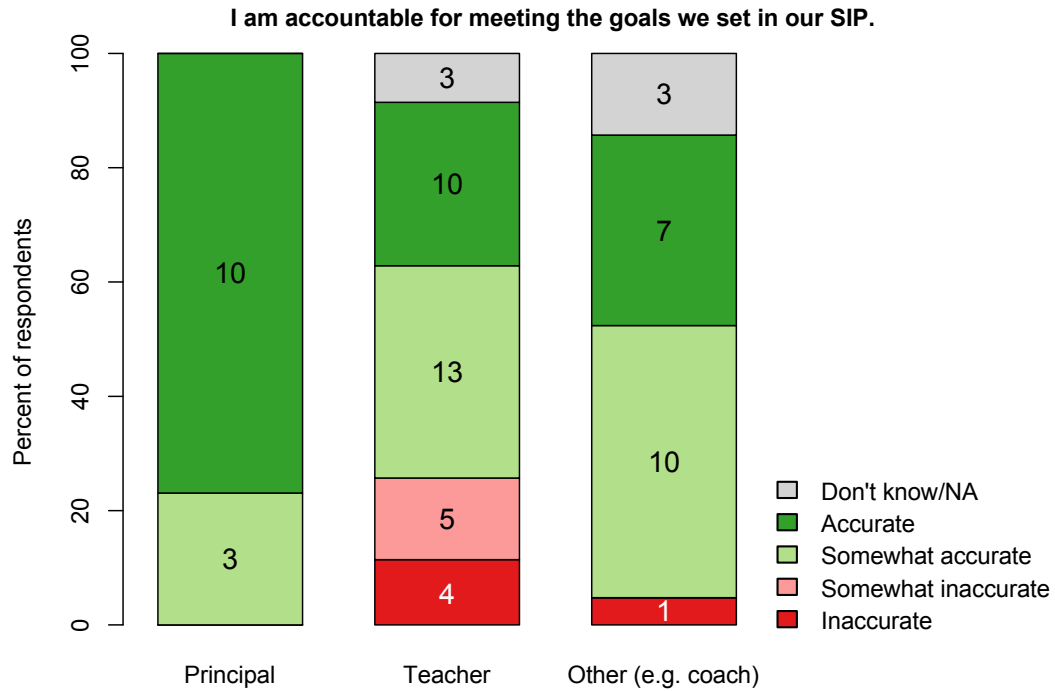
Figure 18 and Figure 19 also demonstrate a significant discrepancy between the external accountability demands on principals compared to teachers and others (e.g. coaches). All principals felt accountable or somewhat accountable for writing a high quality SIP; teachers and others were much less likely to feel this way.

One additional form of external accountability at play in the SIP process in CPS was the external accountability created by the School Committee. Cambridge has an elected, seven member school committee that meets roughly bi-weekly. On December 19, 2015, all revised SIPs were submitted to School Committee members in binders. On January 6, 2015, I presented the revisions to the SIP process to the School Committee and explained the research behind the changes. I explained that we submitted the plans in binders, not in bound books as in previous years, to symbolize our hope that the plans will be continually used and updated over time. School Committee members considered the plans a “huge improvement” over previous years with one member stating, “There’s just no comparison in terms of the rigor and the amount of reflection” (Cummings, 2015a). Although all principals attended the January 19 School Committee meeting, they did not present their individual SIPs to the Committee. However, several School Committee members suggested that individual SIPs be presented in the future. I worry that this form of external accountability would further reinforce the focus on a plan instead of a continuous process. Even this year, presenting the plans to the committee provided pressure on the TLT to ensure that all plans were “finished” before the January meeting, rather than in a perpetual state of revision, as would be the case in a true improvement process.

We did not create any external accountability systems to ensure that schools made the revisions requested in the SIP feedback. As a result, some revisions were made, and some were not. Furthermore, there were few external accountability structures for *using* the SIPs, and this is reflected in the survey responses (Figure 19). Although we asked all schools to complete the reflection protocol by March 20, 2015, we did not create additional systems to ensuring that schools followed through on that goal. We did not ask schools to submit any reflections or revised versions of their SIPs after they completed the reflection protocol because we were afraid that adding additional requirements would reinforce the reflection protocol as an exercise in compliance.

Finally, given the relative lack of district-level external accountability structures for using the SIP, I was initially surprised to see that 77% of principals stated that it was “accurate” that they were accountable for meeting the goals in the SIP, and the rest said that statement was “somewhat accurate” (Figure 20). As far as I know, there were no formal district systems for checking whether or not schools met their SIP goals. However, one TLT member informed me that many of the goals she set with principals for their evaluations were connected to goals in the SIP. In addition, since many long-term goals in the SIP were related to MCAS, principals may have felt accountable to the state for meeting the gap-narrowing goals that help them move up to or stay in “Level 1” status according to the state accountability system.

Figure 20: SIP Survey Results, Accountable for Meeting Goals



3. Although the Data Wise Process may have continued to build internal accountability at Schools A and B, the district has not yet intentionally built internal accountability at other schools across the district.

Evidence suggests that the Data Wise Improvement Process at Schools A and B increased internal accountability within the teams engaged in the process. It is likely that Schools A and B had a higher level of internal accountability than other schools across the district in the first place. After all, these were the schools that agreed to participate in the Data Wise Improvement Process, suggesting some level of initial internal commitment to engaging in a process together. Nevertheless, DWIP demonstrably strengthened the internal accountability that existed at each school. For example, the grade level team, principal, and coaches at School A and the ILT at School B achieved a

greater level of agreement about how, specifically, they hoped student learning would improve (the learner-centered problem) and how, specifically, they hoped to improve instruction (the problem of practice) by achieving consensus on the LCP and PoP.

In a focus group with Data Wise team members at School A, participants shared that the Data Wise process helped build greater agreement on norms, values, and expectations, all components of Elmore's definition of internal accountability. A teacher participant shared, "Trust/openness takes a few meetings to establish. The norms [that we used together] really helped with this." The math coach noted a sense of shared values, stating, "We took the time to sit here and talk about our common experiences (observations, things we value) so we have a greater understanding of what the people in this room think about teaching and learning and why." A teacher shared that the process was "very 'we' oriented. It was never one individual dictating what should be done... we always came to consensus." Finally, the principal noted that team members were present at every meeting, stating, "We were working towards a goal [and] we felt as though we had to be present because we didn't want to let members of the team down."

In addition, at School B, teachers on the ILT visited each others' classrooms to look for evidence of instructional practice along dimensions they had collaboratively decided were effective in addressing the learner-centered problem. Many School B teachers shared that this was the first time they had visited each other's classrooms, and definitely the first time they did so with a common instructional goal in mind. As teachers recorded notes about what teachers were and were not doing, they were in many ways holding each other increasingly accountable for the goals they set in their SIP and through the Data Wise process.

Across the rest of the district, however, we did not intentionally build internal accountability for completing the action steps or meeting the goals written in the SIPs. Although we provided support to school teams in writing the plan, and some support in using the plan (by sharing the reflection protocol with all principals, and adding additional support at Schools A and B), we did not provide any explicit support in *sharing* the plan or developing strategies to involve more staff in developing the SIPs. Most of our professional development was targeted only towards principals. Furthermore, given the demands on everyone's time in schools, many principals did not create strategies to share their SIP with their staff. One principal stated in the SIP survey:

When the SIP is written by two or 3 people, and not done collaboratively with a team, such as an ILT, there's no collective ownership. It [should be] an opportunity to share the work, the decision-making and data collection of what is most important. Asking teachers to take on initiatives without their involvement, voice and buy in is a recipe for failure.

This quote demonstrates a relatively low level of internal accountability, or collective responsibility, for the goals and strategies in that school's SIP. My survey data provide further evidence for a lack of internal accountability in schools. On most survey questions, there is a significant discrepancy between the responses of principals when compared with the responses of teachers and others (e.g. coaches). For example, most principals stated they were accountable for writing, using, and meeting the goals set in the SIP, but many teachers and others (e.g. coaches) did not (Figure 18, Figure 19, and Figure 20). In addition, although most principals said it was at least somewhat accurate that they had the skills to write a high quality SIP, most teachers disagreed or didn't

know (Figure 21). While 50 – 60% of principals and others (e.g. coaches) reported that this year’s SIP process was more likely to improve teaching and learning than in previous years, only 25% of teachers agreed (Figure 12). Furthermore, although 91% of principals stated that it was “accurate” that they contributed their ideas to the SIP, only 17% of teachers and 56% of others (e.g. coaches) agreed (data not shown).

All of these findings point to an overall lack of internal accountability regarding the goals and strategies in the SIP between teachers, others (e.g. coaches) and principals. If teachers are not meaningfully involved in creating and using the SIP, it seems unlikely that the strategies in the SIP will impact classroom instruction. I describe suggestions for how support structures could be used to build internal accountability in schools in the Implications section.

Perhaps the closest we came this year to developing internal accountability for the SIP in schools was through the SIP reflection protocol. When I observed the protocol being used at School E, the ILT members described a more widely shared understanding about the goals and strategies in the SIP. Participants mentioned that, before the protocol, they were not even aware that anyone was supposed to be completing the action steps identified in the SIP. After the protocol, they revised their list of intended actions and impact based on the collaborative conversation. Therefore, I am hopeful that the SIP reflection protocol will provide a new tool to involve more staff in understanding the SIP. For example, all teachers participating in the first part of the protocol (described by School F in the Description section) could lead to a heightened understanding of the goals and action steps of the SIP. As noted above in the Analysis section, external accountability does not often build internal accountability. In this case, however,

requiring schools to complete the SIP protocol, a form of external accountability, could plausibly lead to the development of internal accountability.

4. Schools varied in their capacity and internal accountability and the support and external accountability were not differentiated to meet their unique needs.

The capacity to engage in improvement processes and internal accountability varies substantially across schools (e.g. Bryk et al., 2010; Elmore, 2006). Because I did not realize the importance of internal accountability until after designing and administering my SIP survey, I do not have much evidence about the variation of internal accountability in Cambridge, except that it was likely initially higher in Schools A and B than in other schools. I have stronger evidence, however, that there was substantial variation in the initial capacity for engaging in improvement processes across schools.

The TLT assessed schools on the first draft of their SIPs using a rubric with a scale of 1 to 4, where 4 is exceeding expectations and 1 is not present. The average score of schools on these indicators ranged from a minimum of 2.2 to a maximum of 3.7, with a standard deviation of 0.48. This large range suggests that schools in Cambridge varied in their capacity for improvement work. The school that received a 3.7 on their first draft probably required less support and accountability from the district than a school that received a 2.2. It is also possible that some schools needed more external accountability than support or vice versa. For example, if a school had the capacity to conduct improvement processes (perhaps as evidenced by strong initial SIP rubric scores), but as not conducting those processes, then that school might have needed more external accountability than support.

Principals and school-based instructional staff also varied in their reported skills and knowledge to write and use SIPs, with about 15% of principals, 36% of teachers, and 20% of others (e.g. coaches) saying it was inaccurate or somewhat inaccurate that they had the knowledge and skills to use SIPs in an ongoing process of improvement (Figure 21 and Figure 22).

Figure 21: SIP Survey Results, Skills and Knowledge to *Write* a Quality SIP

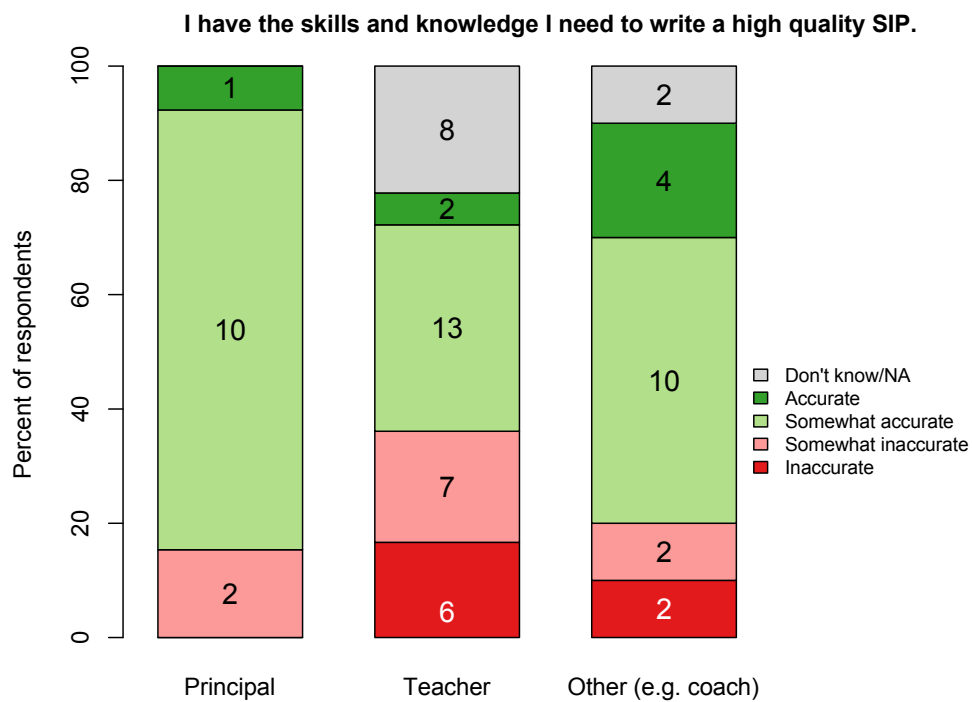
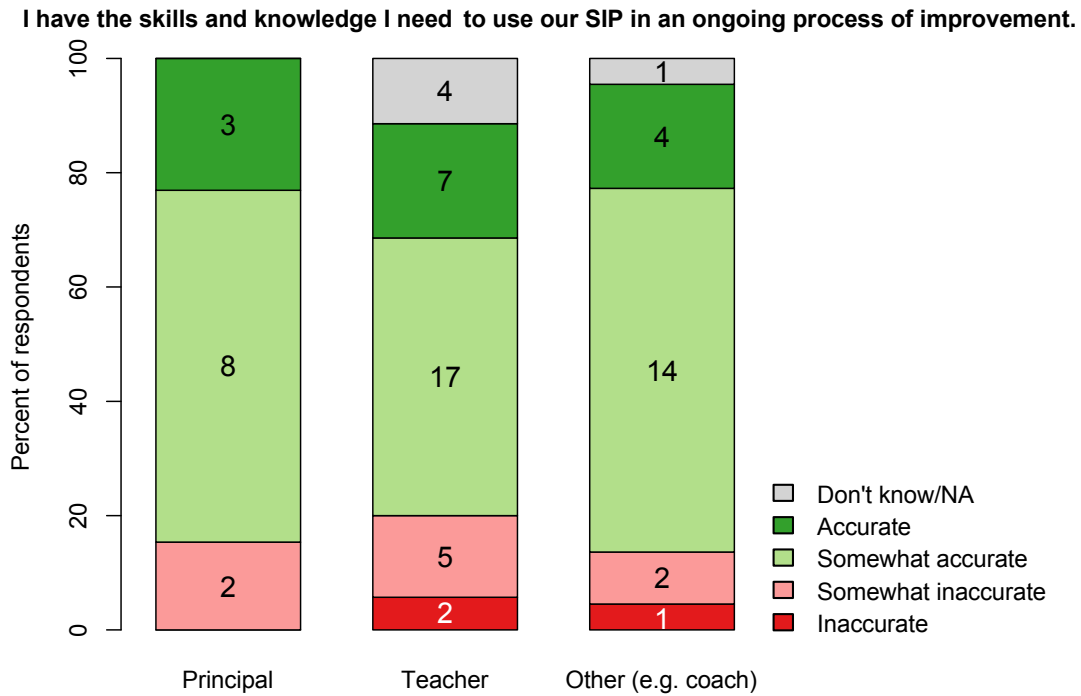


Figure 22: SIP Survey Results, Skills and Knowledge to Use the SIP



In addition, my survey questions did not assess variation in the amount of time that school teams could commit to engaging in improvement processes. A lack of time for staff involvement and professional development around SIPs was the most commonly cited barrier to using SIPs to improve teaching and learning in Cambridge (Table 21). As in any school system, there were multiple competing priorities for principals’ time. For example, several principals anecdotally shared with me that the majority of their time was spent supporting a small number of students with significant socio-emotional challenges, and therefore had little time to develop and use SIPs. The district clearly identified this need and is currently working on building more extensive support structures for schools in the area of socio-emotional learning, but for now it remains a competing commitment for many principals to engaging in improvement processes. The planned district-level supports for socio-emotional learning include supports within the school and include

developing partnerships with community organizations outside of the school. The importance of community factors in developing supports for school improvement connects to the research of Bryk et al. (2010) in Chicago and, though beyond the scope of this capstone, would be an interesting avenue for further study.

There were also likely variations in initial capacity for engaging in improvement processes across the four school improvement pilot schools. Perhaps one of the reasons that my support was accepted more at Schools A and B than at Schools C and D is that Schools A and B had a higher level of capacity to engage in improvement processes. The principals of Schools A and B were both initially excited about my proposal to support them in a Data Wise process, suggesting they could see the value of engaging in improvement processes. The belief in the value of improvement processes may be a prerequisite to building the skills to engage in them. Second, the leadership team at School B had attended the HGSE Data Wise institute in Summer 2012, providing them a baseline level of understanding of the skills needed for the process. Furthermore, both School A and School B were rated by the state as Level 1, the top tier of schools in Massachusetts. These qualities suggest that Schools A and B may have had more bandwidth to devote to improvement processes than other schools in CPS.

By contrast, Schools C and D both faced significant challenges this year. Because of School C's Level 3 status, staff members were overwhelmed by many voices and stakeholders suggesting a variety of improvement strategies. Similarly, the principal of School D (which was classified as a Level 2 school) mentioned to me a desire to be more engaged in using the SIP, but several new, time-consuming initiatives this year and

meeting the needs of the school's neediest students leave less time for focusing on the SIP.

The variation of impact based on school capacity is closely related to Elmore's (2005) institutional response theory, which holds that, because schools vary along many dimensions, "uniform policies produce differential responses and producing more uniform results requires differential treatment" (p. 21). In other words, if the external accountability and support structures that are put in place do not vary based on schools' capacity, those structures are unlikely to be consistently effective across all schools. In particular, schools that have higher capacity for improvement will be more likely to use the tools and training the district has provided successfully, whereas the schools that have less capacity will not. This is problematic because schools that have the least capacity are those that need to improve the most and suggests that the external accountability and support structures likely need to be differentiated by school need.

Because we did not identify the need to differentiate support and external accountability by school until after the 2014 – 2015 SIP process was well underway, we did not effectively differentiate any of our support or accountability structures. For example, all principals received the same 9.5 hours of professional development and 3 additional hours of time to work on their SIPs. I discuss ways that the district could address these needs in the Implications section.

5. The district leadership has not yet built internal accountability of its own for engaging in improvement processes.

My analytic framework (Figure 15) can apply at any level of the system because district leadership, school leadership, and grade-level teams should all be engaging in PDSA cycles. For example, district leadership teams should be conducting PDSA cycles around the effectiveness of the external accountability and support they are providing to schools in conducting their PDSA cycles. In order to engage in that PDSA cycle, the district leadership team needs sufficient internal accountability and capacity as well. Further applying my framework, it would be interesting to consider the external accountability and support that could be aimed at the district leadership team (such as from the state), though that is beyond the scope of this capstone. In this section, I examine the internal accountability and capacity at the district leadership level for engaging in improvement processes.

Evidence suggests that district-level instructional leaders (i.e. the TLT) in Cambridge were working on building an agreement about the norms, values, and expectations of their work (the definition of internal accountability). The 2014 DESE report on Cambridge stated, “Some interviewees expressed a lack of clarity about who is responsible for aspects of core systems in the district related to teaching and learning... The lack of clearly defined responsibilities, lines of authority, and accountability structures are preventing the district from fully leveraging its new organizational structure” (Massachusetts Department of Elementary and Secondary Education, 2014, pp. 30–31). Furthermore, only three of the six members of the TLT (including myself) participated consistently in the SIP feedback process, suggesting a lack of internal

accountability for the value of giving feedback to schools on their SIPs. If district leaders do not have a high level internal accountability for supporting improvement processes, it will be harder for them to work together to build the internal accountability of school teams. Finally, the district as a whole had not yet codified its vision into a multi-year district improvement plan.

6. I personally struggled to build internal accountability at the district level because of my own assumptions about my legitimacy.

In this final part of the Analysis section, I consider my own personal leadership actions and the extent to which they did and did not further the goals of my strategic project. Upon reflection, my ability to increase internal accountability and capacity was inversely related to the level of hierarchy in the organization: I was most successful with school-based teams, and least successful at the cabinet level. To better understand this observation, I apply four different frameworks (Moore, 1995; Kegan & Lahey, 2009; Edmondson, 2012; and Patterson et al., 1986) that each help to explain how some of my own assumptions, as well as my own positional authority (or lack thereof) impacted my ability to create change.

One way to analyze these patterns is through the lens of Harvard Kennedy School professor Mark Moore's "strategic triangle." Moore's framework includes three elements that public managers must align to effect change in the public sector: a conception of the public value to be produced, the operational capacity needed to produce it, and sources of legitimacy and support (Moore, 1995). My analysis thus far has focused mainly on the operational capacity to shift to on-going improvement processes,

which could encompass the categories I have labeled as capacity, internal accountability, external accountability and support in my analytic framework. I have also described the ways in which I sought to demonstrate the public value of engaging in improvement processes, by assessing the extent to which different stakeholders viewed SIPs as “meaningful” documents. I have not yet focused, however, on the extent to which I was or was not able to personally build legitimacy to effect the changes necessary to meet my vision of using SIPs in improvement cycles, and focus on this aspect of my leadership here.

On the two school-based teams with whom I worked most closely, Schools A and B, I was able to build legitimacy by designing engaging, focused agendas for participants. As team members saw me adding value to their process, they gave me more credibility. One of the coaches at School B told me that she appreciated my steady way of pushing the team without being overbearing, and using protocols to elicit universal participation. Participants at School A shared that the norms we developed together helped everyone feel more safe to disagree with each other and share honest opinions. As a result, I was able to lead substantial changes to the design of grade-level meetings at School A and the ILT meetings at School B, all building internal accountability.

In a similar fashion, I built legitimacy with principals across the district through my facilitation of district-wide administrator meetings. Several principals told me that they appreciated the structured, purposeful agendas that I helped lead, starting in August 2014. Many principals also appreciated the clarity of the feedback on the SIPs I facilitated and shared with them. One principal survey respondent stated, “Bob’s energy and enthusiasm for the project made it all worthwhile! This was the first time I got

critical feedback on an SIP, and that made a huge impression.” In addition, I believe that continually soliciting feedback from principals on the SIP process, through surveys as well as one-on-one meetings, demonstrated that I really cared about their opinions and would shift course based on their ideas. One principal survey respondent wrote, “Working with Bob E. was a huge advantage because he made it safe to ask questions and take risks.” As a result, most principals were open to relatively significant shifts in the format and use of SIPs this year. When I asked principals to conduct a new reflection protocol this spring, they generally responded positively, perhaps because of the relationships I established and credibility I had built. My lack of formal authority may actually have been an asset with the principals: I was not telling them they had to do something, but rather sharing with them the reasons for why I hoped they would want to do it.

My ability to effect change on the TLT (at the district level) was more mixed. I was able to establish legitimacy in the first two months of my residency by leading the planning for the first administrator meeting focused on data analysis. I felt comfortable taking a leadership role early on because the work of using data to inform school-level improvement was an area where I felt I had expertise. Furthermore, I was able to develop and use tightly focused agendas and set of group norms for the SIP feedback meetings, which were consistently productive. However, I was not able to ensure that all members of the TLT participated in the SIP feedback meetings, nor was I able to ensure that the norms we established for the SIP feedback work were applied in other TLT meetings throughout the year.

I believed that I did not establish as much legitimacy at the cabinet level as at other levels of the organization and thus was least able to effect change at the cabinet level during my residency. In general, I participated less in cabinet discussions than in meetings with the TLT, principals, or school-based teams. On one occasion, I suggested an agenda for cabinet that involved structured protocols to guide a conversation. When my plan was not adopted, I did not assert my values for why I thought it could be useful.

One way of summarizing these patterns is that I was most successful in asserting my values (particularly those around the importance of clear agendas, protocols, and the use of norms) at the school and principal level, and least successful in asserting those values at the cabinet level. In part, I attribute this pattern to my own lack of experience, and therefore an initial lack of confidence, as a district-level leader. Before my residency, I had almost ten years of experience as a classroom teacher and many years in formal and informal leadership roles at the school level. My experience in Cambridge, however, was the first time I had participated in conversations at the district cabinet level.

On a deeper level, my challenge in asserting my voice at the cabinet level was also closely connected to my personal leadership goal, expressed through the “Immunity to Change” framework (Kegan & Lahey, 2009). Kegan and Lahey’s framework asserts that any goal that requires a change in mindset has a hidden, competing commitment that works in opposition to that goal. In brief, my personal leadership goal was to more consistently take other people’s perspectives as object and continually re-center myself in my own values. My competing commitment, however, was that I was also committed to not being perceived as “less-than” by others. The “big assumption” embedded in my

Immunity to Change was that I assumed that if I held tightly to my own values, I could have been perceived as “less-than” by others.

In many ways, the Immunity to Change framework fits nicely with the Model for Improvement (Langley, 2009) that I used to design the action-planning template in CPS. Both models suggest engaging in cycles of improvement based on clearly defined goals. The Immunity to Change framework labels these cycles of inquiry as “tests of your big assumption.” To test the big assumption embedded in my Immunity to Change, I needed to hold tightly to my values, assert them, and assess if people perceive me as “less-than” or incompetent in some way.

Despite all my work supporting schools in writing action plans based on the Langley (2009) Model for Improvement, I did not create my own concrete action plan for my personal leadership goal. I informally tested my big assumption on the TLT early on in my residency by asserting my perspectives in TLT meetings and subsequently asking people for feedback on the role I played in meetings. Was I talking too much? Getting in the way? Taking us off track? The feedback I received from TLT members was almost always positive and I was on my way to overturning my big assumption as it applied to the TLT. One important caveat to this pattern was a situation when I failed to read the emotions of the team members, who were tired and under significant stress. Although I contributed thoughtful questions to the conversation, I inadvertently created additional frustration because the team members needed to take a break from the process. In that moment, I should have held back a little more, given the tension in the room.

Finally, I rarely tested my big assumption at the Superintendent’s cabinet. On one occasion, I mentioned my plan for an agenda with structured protocols, but I did not

respond by stating my values when it was not adopted. At another cabinet meeting, I simply asked, “What are the next steps here?” I have no evidence that cabinet members perceived me as “less-than” by asking that question, but I did not ask many similar questions in the future.

I am not alone in having struggled to assert my values to people in positions of greater positional authority. Amy Edmondson describes this phenomenon in teams across many industries, writing, “Fear in those with subordinate roles leads to a tendency to conceal one’s tentative thoughts. Not surprisingly, this desire to fade into the background hinders the process of teaming. Consider some common euphemisms for speaking up: ‘sticking one’s neck out’ and ‘rocking the boat.’ Small wonder that our overriding tendency is not to speak up” (Edmondson, 2012, p. 133). Edmondson was writing to explain the importance of “psychological safety,” which she defines as “a climate in which people feel free to express relevant thoughts and feelings” (Edmondson, 2012, p. 118). Edmondson describes several leadership behaviors for cultivating psychological safety, including: inviting participation; highlighting failures as learning opportunities; and holding people accountable for transgressions. I was able to create many of these conditions with principals and school teams by soliciting feedback, describing revisions to the SIP process based on that feedback, and developing and using group norms, but I was less successful in personally creating these conditions with the TLT or cabinet.

In many ways, the challenge of building internal accountability at either the school or district-level is related to the idea of schools and districts as “non-rational” organizations (Patterson et al., 1986), as described in the addendum to my Review of

Knowledge for Action. It did not matter if the norms and agendas I developed for the TLT were useful or engaging if competing priorities prevented team members from attending the meetings. There are many long-term, adaptive challenges in Cambridge, and I was unlikely to be able to solve them in one year as a doctoral resident.

On one hand, continuous improvement cycles can take into account these non-rational tendencies of schools and districts because improvement cycles inherently involve repeated tests and experiments. If a given action does not lead to the intended result, the school can critically reflect on what is happening that might get in the way of the work, and hopefully develop a new way to attack the challenge. The frustrating Catch-22 is that if a team does not have sufficient internal accountability to engage in an improvement process, they will inherently not be able to use that improvement process to identify the barriers to its use. I take up this dilemma in the Implications for Sector section.

Revised Theory of Action

I conclude my Analysis section with a revised theory of action for Cambridge Public Schools. I have identified changes from my initial theory of action by inserting the new additions in **bold text**. The Implications for Site section describes concrete suggestions for how to implement this theory of action in CPS in the future.

If the TLT can...

- **Provide support that develops internal accountability in schools**
- **Continue to build the capacity (skills, knowledge, and time) of school staff to engage in improvement processes**

- Facilitate the collaborative development of district feedback about SIPs to schools with the aim of helping schools improve the actionability and focus of their SIPs
- **Hold school leaders accountable for collaboratively reflecting** on progress towards shorter-term outcomes **three times a year**
- **Differentiate support and external accountability based on capacity and need**
- **Build internal accountability for improvement processes at the district level**

Then...

- School leaders and teachers will be more likely to view SIPs as meaningful documents
- Principals and ILTs will continually revise their improvement plans and processes based on evidence and feedback (thus moving from a “plan” to a “process”)
- **School leaders, coaches and teachers will hold each other accountable for putting the** strategies embedded in the SIPs into action in schools and classrooms

Implications for Site

I organize the implications for site through the lens of my analytic framework (Figure 15), making recommendations for how to improve the support and external accountability in CPS to build and align to existing capacity and internal accountability for engaging in improvement processes. For each implication below, I propose a few concrete examples of what that implication could look like in practice. Of course, it is up to the district leadership to determine exactly how to apply these implications.

1. Provide support that develops internal accountability in schools

Elmore defines internal accountability as “a high level of agreement among members of the organization on the norms, values, and expectations that shape their work” (Elmore, 2004, p. 134). Therefore, the district support structures should seek to build a shared understanding of norms, values, and expectations across the staff in schools.

One way to develop internal accountability is to build structures and systems for involving a broader amount of stakeholders in developing the SIP and communicating the strategies in the SIP to facilitate wider understanding of the values and expectations embedded in it. Significant discrepancies exist between principals’ and teachers’ understandings of the expectations embedded in their schools’ SIPs. By far, the most commonly cited barrier to meaningful use cited by SIP survey respondents was the lack of staff involvement in the process. Fortunately, several principals have already identified strategies to more fully involve their staff in the SIP development. For example, the principal of School A used a Google Survey to solicit feedback on the three strategic objectives for the action plans from the entire staff. To help share these best

practices, the district could facilitate a [Success Analysis Protocol](#)⁹ at an administrator meeting to analyze the most effective strategies in use across the district. They could also ask that schools submit a Communication Plan as part of their SIP as a form of external accountability that might build more internal accountability by gaining greater consensus around the goals in the SIP. The emphasis, however, would need to be on *using* the Communication Plan rather than just writing it. Otherwise, it could end up as another exercise in compliance.

A second challenge with the revised SIP structure is that the plans can be 10 – 20 pages long. Although many survey respondents reported that these plans are more focused than ever before, they still represent a lot of information. A teacher at School B suggested in the survey response, “Bring [the SIP] down to an every day usable level for all involved.” To that end, schools could develop a one-page summary of the plan that can easily be shared with a variety of stakeholders: teachers, parents, community members, and other schools across the district. Each School Council (consisting of parents, teachers, and the principal) could develop the one-page summary as a way to capitalize on the diversity of School Councils and involve them in an important task for school improvement.

Finally, to help schools develop a shared understanding of norms, members of the CPS cabinet could model how to develop norms for the group of principals across the district during administrator meetings. They could propose the same norms that I used with the TLT for the SIP Feedback Meetings, adapted from (Boudett & City, 2014), and then solicit feedback from principals before adopting them and using them with their own

⁹ http://www.nsrffharmony.org/system/files/protocols/success_analysis_reflective_0.pdf

staff members. For the norms to be meaningful, it is essential that schools reflect on their use of the norms at the end of each meeting.

2. Continue to build the capacity (skills, knowledge, and time) of school staff to engage in improvement processes

The district should actively consider how to increase all aspects of school staff members' capacities to engage in improvement processes: skills, knowledge, and time to engage in the work.

The most frequent suggestion for how to improve the SIP process according to the SIP survey was to increase the amount of time schools have by starting earlier in the school year. For example, a School F other (e.g. coach) respondent stated, "Tighten the time line. SIPs were not finalized until almost December - more than a third of the way through the school year." Many principals have told me anecdotally that the summer (shortly after school ends or shortly before school begins) is an ideal time to work on the SIP because there are fewer competing priorities without students in the building. A key challenge, however, is that MCAS data is not released until August, making it impossible to analyze this key data source in the early summer.¹⁰ However, the district has also adopted nationally-normed formative assessments that are released before the end of the school year and could also be utilized in the SIP process. Another key challenge is how to align the SIP timeline to the timeline associated with school improvement budgets. The TLT and a few interested principals could meet together to problem-solve all these competing demands to develop an improved timeline for next school year.

¹⁰ As Massachusetts shifts to assessments of the Common Core State Standards, this timeline will shift and may pose less of a challenge in the future.

Although these modifications could be useful, it is also important to not completely change the SIP process next year. One principal survey respondent suggested, “Lay out a process and stick to it. I think this one worked well, and I would say it can only get better if we do the same thing twice.” Several principals have shared with me that it is difficult to get better at using SIP templates that are changing substantially from year to year, as has been the case in CPS. Therefore, although some incremental changes could be made to the templates (e.g. reframe “early evidence of change” section as “impact for students,” “impact for teachers,” and “actions we plan to take”), I think it will be easier for school staff to build their skills in using the templates if the templates stay roughly the same.

Finally, it is important for the TLT to consider how to streamline the feedback process to schools on their SIPs. The purpose of the feedback we provided to schools was to help build their leaders’ knowledge and skills in writing focused and actionable SIPs, and evidence from the survey suggests that the feedback mostly achieved this goal. The process was so time-consuming, however, that three out of six members of the TLT had only limited participation in the process. A key challenge is that although the feedback is richer when provided by multiple district staff members, each district staff member’s time commitment increases with the number of district staff who provide feedback to each school. One way to balance having multiple perspectives without overloading too many district leaders is to develop a process in which each school receives feedback using the SIP rubric from three people: the principal’s supervisor, an expert in curriculum, and an expert in student services. Although the principal supervisors (Deputy Supt. and Asst. Supt. of Elementary Education) would still need to

provide feedback to six and twelve schools, respectively, more flexibility could be used regarding the other feedback providers. For example, the expert in curriculum could be the Assistant Superintendent of Curriculum and Instruction or one of many curriculum coordinators at the district level. Similarly, the expert in student services could be the Asst. Supt. of Student Services, or one of the four coordinators/directors in the Office of Student Services.

3. Increase external accountability for using the SIP (not just writing it)

Although only one school has used the reflection protocol as of this writing, the experience was a positive one. Holding schools accountable for completing the reflection protocol is a way of holding them accountable for using the SIP in ongoing cycles of improvement. Furthermore, it is possible that if schools engage in these processes, and if they lead to improved understandings and outcomes, school staff members may be further convinced of the importance of engaging in improvement processes. This notion, that beliefs follow actions, is closely connected to the concept of “orthopraxis,” which is defined as practice-driven rather than belief-driven religious activities. Cossentino (2005) describes Montessori education as an orthopraxic system because the beliefs in the power of the model stem from repeated pedagogical rituals. The district could ask schools to complete the “ritual” of reflecting on the SIP three times a year to increase the beliefs in the power of improvement processes.

Furthermore, the experience of School E in completing the reflection protocol suggests that requiring schools to use the protocol may build internal accountability at the school level by developing broader understanding of the goals of the SIP. Before the protocol, it was clear that not all members of the ILT understood the intended actions and

impact embedded in the SIP. After the protocol, participants stated that they understood the goals in new ways and achieved greater clarity about their intended areas of focus.

4. Differentiate support and external accountability based on capacity and internal accountability

Institutional response theory (Elmore, 2006) posits that in a setting where capacity varies, uniform policies result in non-uniform results. If the goal is for all schools in CPS to use SIPs to improve teaching and learning, additional supports should be provided for those schools with the lowest capacity or lowest internal accountability for engaging in improvement processes. One way of determining which schools receive additional support is to select all schools that are Levels 2 and 3. However, it is possible that some Level 2 or 3 schools have principals and/or staff with higher capacities for conducting improvement processes than those of some Level 1 schools, and that possibility should be carefully considered. To provide additional support, the principal's supervisor could meet weekly with the principal to discuss how to write and use a high quality SIP. An important challenge to this recommendation is that, as exemplified by the experiences of Schools C and D, schools that need additional support may lack the time to use that support. Therefore, it is also essential that the district consider how to build in additional time for schools and their leadership teams to do this work. For example, the district could consider focusing the external stakeholders partnering with Level 3 schools so that schools are not pulled in multiple directions for their time.

The district could also consider partnering with an external consultant that specializes in conducting improvement cycles. The Data Wise process, in particular, led to increases in internal accountability at Schools A and B, and thus could be a powerful

lever for improvement at additional CPS schools. Unfortunately, there has been significant criticism from parents and School Committee members about high-priced consultants in Cambridge during the 2014 – 2015 school year (Cummings, 2014) and that may make such an option politically difficult in the near future. Regardless, the support provided should be a good fit for what the schools need, especially given my own challenges in supporting Schools C and D this year.

It may also be useful to develop additional external accountability systems for those schools that are receiving additional support. For example, the principal and/or ILT could present their progress on short-term outcomes to district-level staff after each SIP reflection cycle in order to both demonstrate their improvement processes and solicit feedback on potential next steps. As always, it is important that these systems do not feel like an overly burdensome compliance activity.

5. Build internal accountability for improvement processes at the district level

Internal accountability will likely be higher on the TLT and the Superintendent's cabinet when there is consensus on clearly defined goals and action steps in a district-level improvement plan. One principal stated in the SIP survey, "Not having a district improvement plan [sometimes called a district strategic plan] is really fragmenting all of the work and makes it extremely challenging for alignment of work." Another principal respondent wrote, "I continue to feel that there should be 1-2 goals from each school that align with district goals and district PD. With 17 schools doing 17 different things, on top of district work that may align or not, is it any wonder we are where we are?"

Unfortunately, because the Superintendent has announced that he will leave the district in June 2016, it may not make sense to begin writing a multi-year improvement plan at this

time of transition. In the interim, however, the district could work on clarifying the priorities embedded in the work already underway to create an 18-month plan for the district. It would be even better if the district leadership team (TLT or cabinet) could apply the SIP reflection protocol to short-term outcomes identified in an abbreviated plan.

Finally, achieving the recommendations described in this section will also require a continued focus on SIPs in CPS. During this school year, I was the main champion of the process and helped facilitate many changes over the course of the year. After I leave the district, however, the responsibilities for SIPs are currently undefined. The Deputy Supt, Asst. Supt. of Elementary Education, and Chief Planning Officer all have some level of responsibility for the process, but there is still a lack of clarity in roles. For example, the Asst. Supt. of Elementary Education oversees all the elementary SIPs, but is not responsible for the Upper School or High School SIPs. The Chief Planning Officer is only half-time at CPS and is focusing on the development of a district-wide improvement plan. The Deputy Superintendent is directly responsible for the Upper Schools and High School, but is also responsible for all instructional initiatives in CPS. All of these individuals are fully capable of leading the process, but the roles and responsibilities could be more clearly defined.

Finally, I believe that the SIP reflection protocol, coupled with the SIP action planning template, can be a powerful driver of internal accountability at the district level as well. The TLT or the cabinet could create an action plan for SIPs, using the same template we created for schools, to specifically identify who is completing what action steps, by when, and what measures will be use to indicate early evidence of impact. Then,

they could use the same reflection protocol we developed for schools to conduct their own on-going process of improvement.

Implications for Self

I plan to apply several lessons from this capstone and my experience with my strategic project to future positions of education leadership. First, I have enjoyed the balance of system-level thinking and school-based instructional support that I was able to create through my project. I was able to lead the district-level TLT to design systems and structures (such as feedback to schools on SIPs, reflection protocols, and SIP templates). At the same time, I was also able to partner closely with a grade-level team at School A and the ILT at School B to facilitate conversations about specific instructional changes based on analyses of student work and teaching practice. For me, these experiences allowed me to simultaneously use the skills I built before the Ed.L.D. program as a teacher and instructional coach, as well as those I built during the program as a system-level leader. I hope to find a similar balance in any job I take next.

Such a boundary-spanning role would almost certainly mean that I would have a position of formal authority on some teams, and be on other teams where others have positions of formal authority. Therefore, I need to be skilled at building credibility and psychological safety with and without formal authority. For teams that I formally lead, I plan to build credibility by building relationships and designing systems and structures that team members feel are authentically useful to them. I plan to develop psychological safety by acknowledging my own fallibility and seeking to learn from mistakes, continually soliciting feedback, and setting norms and holding people accountable for using them (Edmondson, 2012).

On teams in which I am not in a formal leadership role, I can build psychological safety by acknowledging my own mistakes, being accessible and approachable, and

inviting feedback on ideas, all from a position of purely informal authority. However, the work of developing and using norms and protocols for reflecting on group process will likely require the authorization of the team leader. I need to apply all the skills that I have learned in persuasion and influence to accomplish that goal in the future.

Second, especially on teams in which I play a subordinate role, I have learned a great deal about how to be more assertive about my perspectives. Cabinet members have told me that I established more legitimacy than I realized at the cabinet level, and I intend to build further upon that in my final months in Cambridge. I have developed confidence in my ability to contribute at the district cabinet level that I did not have before I began my residency.

In addition, I must continue to develop my capacity in “reading the room” to better understand the emotions of team members and how my actions should be adjusted to fit those emotions. I failed to do this during a TLT meeting this winter and I inadvertently increased the frustration level, which prevented us from achieving the goals of the meeting. This situation reminded me of similar situations on my Workplace Lab team as a year one Ed.L.D. student. I wrote in my final reflection for the teaming portion of the class in Spring 2013, “I was not always aware of other team members’ emotions because I was sometimes more focused on the task.” I must continually read others’ body language and tone as indicators of their emotions. If I realize that others are experiencing significant emotions, I may need to change my actions by inquiring about their emotions, taking a break, or pushing a little less hard.

Implications for Sector

Since SIPs are so common across the country, many of my implications for CPS could apply across the education sector.

Include shorter-term outcomes and a reflection protocol for SIPs to shift from a plan that sits on the shelf to an on-going improvement process

Although 88.2% of public schools across the country had formal school improvement plans in 1999 – 2000 (Fernandez, 2011), they are still largely considered exercises in compliance that are disconnected from the daily work of improving teaching and learning. However, improvement processes such as PDSA cycles or inquiry cycles have been demonstrated to lead to improvements in outcomes across a variety of contexts (e.g. Langley, 2009). It is difficult to use SIPs in cycles of improvement if the only goals that exist are for the end of the school year, especially if those goals are rooted in state assessments that are not necessarily aligned to any particular strategy that the school is using. On the contrary, if school leaders can set and measure short-term (e.g. quarterly) goals that are closely aligned to the initiatives they implement to drive improvement, and if they have a process to reflect on those goals periodically, then the SIP can be used in an on-going cycle of improvement.

My experience in CPS suggests that making this shift will not be easy. Langley's (2009) three key questions for improvement (What are we trying to achieve? How will we know if a change is an improvement? What changes can we make that will result in improvement?) seem simple but are actually quite complex. System-level leaders will need to systematically build the capacity of school teams in answering these questions through on-going professional development and feedback. They will also need to

provide training in reflection protocols to look back at the shorter-term goals in the SIPs. These shifts will need to take place in non-rational systems that always have competing goals and priorities. Nevertheless, districts need to realize that improving the quality of teaching and learning is the core work of any school system, and engaging in on-going cycles of improvement is the way to achieve this goal.

Support schools in developing internal accountability for goals and strategies in SIPs

The survey results in Cambridge uncovered a clear disconnect between the perceptions of teachers and principals regarding SIPs. In particular, there were substantial discrepancies between teachers and principals on questions asking if they know what is written in the plans, if they contributed their ideas to the plans, if they believe the strategies in the SIP will improve how teachers teach, if they consider the SIP a plan that “sits on the shelf,” and if this year’s process was more likely to improve teaching and learning than last year’s process. These results mirror the findings of Dunaway et al. (2012), Buffett (2005), and Mintrop & MacLellan (2002), all of whom identified clear disconnects in the value of SIPs between teachers, principals, and district leaders: across the country, district leaders and principals believe that SIPs are more valuable than teachers. This pattern is problematic since it is ultimately teachers who must enact the strategies in a school improvement plan to drive improvements in student learning.

Achieving clearer consensus around goals in the SIP requires achieving a greater level of internal accountability across instructional staff in schools. The recommendations I outline for CPS in my Implications for Site section could apply more broadly across the sector: help schools develop communication and involvement plans so

the SIP does not live with just a few staff members, develop easier-to-read one-page versions of SIPs, and build collective understanding of the SIP by engaging in repeated reflection protocols.

Align resources to provide additional support to schools for using their SIPs

Several studies (e.g. Gallimore et al., 2009; Talbert et al., 2010) and several examples from practice (e.g. Boston, MA, Madison, WI, and Prince George's County, MD) demonstrate the benefits of providing additional supports to schools engaging in improvement processes. In each of these cases, the school district created new roles (e.g. school improvement partners) whose full time job was to support schools in cycles of inquiry connected to improvement plans or processes. Similarly, the support I provided to Schools A and B showed promising signs of improving instruction and internal accountability.

I am aware, however, that all school systems face many competing priorities for funding and it will be challenging to create full-time roles devoted to supporting school improvement processes. In Cambridge, for example, members of the community and School Committee voiced opposition to hiring additional staff in the central office. (Cummings, 2015b). Therefore, my implications for CPS do not include creating any additional central office roles, and instead rely on shifts in external accountability and support provided by existing district staff. Similar shifts in roles and responsibilities in districts across the sector could result in additional supports for improvement processes without the creation of new full-time positions.

External accountability needs to focus on using SIPs, not just turning them in

Reeves (2006) noted that “prettier” plans (i.e. plans that have higher conformity with plan requirements) are actually inversely related to student achievement. The “uglier” plans, those that may be written in short-hand, or contain scribbled notes from reflection meetings, are actually more highly correlated with improvements in student achievement. Although correlation is not causation, the study suggests that our focus should not be simply on submitting “pretty” plans. Yet in Cambridge, and surely in many districts across the country, many stakeholders are concerned about the prettiness of plans. External accountability systems that focus solely on the SIP document itself actually reinforce the view of SIPs as compliance documents. Instead of worrying about spelling errors or glossy cover pages, we should be worried about what schools actually *do* with the plan once it has been written. The external accountability systems must focus on how schools reflect on short-term progress in the plans, and what changes they make as a result of that reflection.

Questions for further study

I conclude my capstone by posing two questions that are unanswered here, but could be considered in future studies.

Do schools (or other teams) need a certain level of initial capacity and/or internal accountability to engage in improvement processes?

Schools A and B likely began the year with a higher level of capacity and internal accountability than other schools in CPS. Perhaps as a result, they were more able to utilize the additional support I provided through the Data Wise Process. Schools C and D did not utilize my support this year and may have had lower capacity or internal

accountability for engaging in improvement processes. Does that mean that Schools C and D will never be able to engage in on-going cycles of improvement? Must schools have some starting level of capacity or internal accountability to use the support a district provides?

I must admit that I hope the answer to this question is that all schools can improve under the right conditions. In terms of my analytic framework, I could frame this hope as: if the district can appropriately differentiate its support and external accountability, then all schools can develop capacity and internal accountability, even those schools that face the greatest challenges. This aspiration follows the belief that I held firmly as a teacher and continue to hold as a system-level leader: all students can and will learn under the right conditions. Undoubtedly, however, the task of improvement will be more challenging in some schools than in others. As Bryk et al. (2010) note in their extensive study of school improvement in Chicago, “For some [schools] the task of improvement is much more formidable than anyone has acknowledged to date.”

What actions can districts take to build internal accountability in schools?

The importance of building internal accountability in schools to engage in improvement processes is clear. Exactly how districts build that internal accountability, however, is less clear. The Implications for Site and Sector sections outline some ideas for ways that districts can build school-level internal accountability (such as helping schools develop a communication/involvement plan), but I have not yet seen any of these strategies in action. Investigating best practices in this area could be a rich topic for future study.

Conclusion

I hope that my Description, Analysis and Implications sections describe both what is possible and what is challenging about using SIPs to improve the quality of teaching and learning in a school system. Although SIPs are incredibly common in American school systems, they are widely viewed as compliance documents that have little connection to the daily work of improving student learning. My goal in CPS this year was to shift the focus away from a document that sits on the shelf and towards an on-going process of improvement. The main strategies I employed to achieve this goal included:

- using learning from research and feedback from school leaders to design SIP templates that focus on shorter-term outcomes and actions;
- designing a reflection protocol for school leaders to use with their staff to reflect on progress towards those shorter-term outcomes;
- facilitating the collaborative development of district feedback about SIPs to schools using a rubric; and
- piloting the Data Wise Improvement Process in two schools to promote the connection between SIPs and the instructional core.

The results of these strategies were generally promising:

- 60% of all responding principals and others (e.g. coaches) said this year's SIP process was more likely to improve teaching and learning than last year's process.
- The SIPs were continuously revised this year (a reported average of 4.1 times).
- All principals and nearly all others (e.g. coaches) said it was inaccurate or somewhat inaccurate that their SIP "sits on the shelf."

- 75% or more of all survey respondent groups (teachers, principals, and others) stated that the SIP was a valuable or somewhat valuable document to them.
- The Data Wise Process that I piloted at two schools helped build a shared understanding of instructional goals and strategies.

However, there were still significant challenges. Principals were much more positive about the improvements to this year's SIP process than teachers, suggesting that the gains in shifting from a plan to a process had not yet reached classroom teachers. This pattern is problematic because it is classroom teachers who must be a part of an on-going improvement process at their school – if teachers are not changing their practice, it is hard to imagine that student learning will improve.

I drew on these results as well as several sources from the research literature to develop a new framework to analyze my results (Figure 15) that states that external accountability and support must align to and improve existing capacity and internal accountability to conduct improvement cycles.

My implications for Cambridge and the sector as a whole focused mainly on systems and structures to promote the development of internal accountability in schools: an agreement about the norms, values, and expectations that shape their work. District-wide professional development should include building school leaders' capacities to involve a broader number of staff members in the design and use of the school improvement plan. In addition, district leaders should hold schools accountable for continuously using SIPs, by requiring that schools reflect on progress towards the goals in their SIPs using a structured protocol. It is also essential to develop internal accountability and capacity for engaging in improvement cycles among the district

leadership team. Building psychological safety among team members will be essential in this work at all levels of the system.

After examining school improvement plans in depth this year, I was recently asked if I thought SIPs are worth the trouble. Given all the competing demands on educators' time, is investing in an improvement planning process worth the effort? One way of answering this question is to look at one more data point from the SIP Survey: 93% of all survey respondents seem to feel that it is a useful process, with 40% stating that it was a "good" use of time and 53% a "somewhat good" use of time. In reflecting on the work this year, I agree with the survey respondents; the time spent on the SIP was somewhere between a "good" and "somewhat good" use of time.

The only "somewhat" part of my answer is because I believe that improvement planning in Cambridge is still more focused on the document than the process that I was trying to facilitate. For example, various stakeholders talk about "approving" the plans or presenting the plans to the School Committee, both of which put the focus on the document itself, and reinforce the view of the SIP as an exercise in compliance. Furthermore, many school stakeholders struggle to write specific, measurable short-term goals that enable meaningful reflection and they are challenged even more to connect those goals to objective evidence of instructional practice. Finally, whereas principals showed more positive engagement with the process this year, teachers remain less involved. SIPs are more likely to successfully improve teaching and learning when teachers are equally invested in using them in an ongoing process of improvement.

On the other hand, I remain convinced that the questions from Langley (2009) that we embedded in the Cambridge SIP Action Plan are necessary to address in any

improvement process: What are you trying to achieve? How will you know if a change is an improvement? What changes are likely to result in improvement? These questions are essentially the same as those that guided my lesson planning as a middle school science teacher and led to systematic improvement in student learning: What is my objective? How will I know if students met the objective? What is my lesson plan to get students to meet the objective? In both cases, the answers to the questions are only meaningful if they are embedded in some sort of cycle of inquiry. In the classroom, I called that cycle of inquiry “formative assessment”; with the SIPs, I called it a reflection protocol. Upon reflection, I might suggest CPS label the SIP protocol “formative assessment” as well to reinforce the similarities between classroom- and school-level improvement.

Therefore, I firmly believe that the thinking behind improvement cycles is more than just a somewhat good use of time; it is *the* way to drive improvement. An unanswered question is whether or not that thinking needs to be codified in a formal plan, or whether codifying it in a formal plan contributes to the compliance nature of the process. In some ways, the more people talk about the planning document itself, the less they focus on the process behind the document. I continue to be interested in the strategy in Prince George’s County, MD, where they have stopped writing SIPs all together, but are instead holding schools accountable for conducting cycles of the Data Wise Improvement Process. Maybe it is possible to ensure schools engage in a process without any formal planning document whatsoever

Nevertheless, I believe that having a written plan can help clarify the goals and strategies of the plan and ensure that it gets enacted; just as writing down a shopping list

helps ensure that I buy the groceries I need at the store. Codifying an improvement process into a focused, written plan has been beneficial in other aspects of our work in CPS as well. In February 2015, the TLT was meeting to discuss a budget proposal for improving the district-level supports for socio-emotional learning. The initial conversation focused on somewhat abstract goals and ideas, without a clear plan to move forward. Eventually, we decided we needed to get more specific: what are we trying to change, how will we measure it, and who is going to what and when. We drafted a brief table that specified the plan in more detail. We realized at the end of the meeting that we just went through the same action planning process we asked schools to complete, and it certainly felt useful. Therefore, I am optimistic that improvement planning, when connected to an on-going process of improvement, can lead to positive results.

References

- 2014-15 School-Based Leadership Team (SBLT) Toolkit | Technical Services. (n.d.). Retrieved September 1, 2014, from <https://techsvcweb.madison.k12.wi.us/sblt-toolkit-2014-15>
- About PGCPS. (n.d.). Retrieved January 31, 2015, from <http://www1.pgcps.org/aboutpgcps/index.aspx?id=171727>
- Bambrick-Santoyo, P. (2010). *Driven by data : a practical guide to improve instruction* (1st ed.). San Francisco, CA: Jossey-Bass.
- Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2009). In 1998 “Inside the Black Box,” the predecessor of this article, appeared in this journal. *Secondary Lenses on Learning Participant Book: Team Leadership for Mathematics in Middle and High Schools*, 99.
- Boston Public Schools. (2014). Year 2 Inquiry Application Overview.
- Boudett, K. P., & City, E. A. (2014). *Meeting wise: making the most of collaborative time for educators*. Harvard Education Press.
- Boudett, K. P., City, E. A., & Murnane, R. J. (2013). *Data wise: a step-by-step guide to using assessment results to improve teaching and learning* (Revised and expanded edition). Cambridge, MA: Harvard Education Press.
- BPS at a Glance 14-1030.pdf. (n.d.). Retrieved December 13, 2014, from <http://www.bostonpublicschools.org/cms/lib07/MA01906464/Centricity/domain/187/publications/At%20a%20Glance/BPS%20at%20a%20Glance%2014-1030.pdf>
- Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S., & Easton, J. Q. (2010). *Organizing schools for improvement : lessons from Chicago*. Chicago: University of Chicago Press.
- Buffett, T. (2005). *The ABCs of school improvement planning: Accountability, building-capacity and compliance* (Ed.D.). Harvard University, Ann Arbor. Retrieved from ProQuest Dissertations & Theses Full Text. (305001486)
- Cambridge Chamber of Commerce. (n.d.). Economic Overview. Retrieved December 29, 2014, from <http://www.cambridgechamber.org/business/economic.html>
- Cambridge Public Schools. (2011). The Innovation Agenda Report. Retrieved December 30, 2014, from http://cpsd.ss5.sharpschool.com/UserFiles/Servers/Server_3042785/File/Migration/Original_TheInnovationAgendaReport_English.pdf?rev=0
- Cambridge Public Schools. (2014a). *Official October 1 Enrollment Report*.

- Cambridge Public Schools. (2014b). *Schools_at_a_Glance_2014_15.pdf*. Retrieved December 29, 2014, from http://www.cpsd.us/UserFiles/Servers/Server_3042785/File/schools/Schools_at_a_Glance_2014_15.pdf
- Cambridge Public Schools. (2014c, April 1). FY2015 Adopted Budget. Retrieved February 27, 2015, from http://www.cpsd.us/UserFiles/Servers/Server_3042785/File/Migration/FY2015_Adopted_budget.pdf?rev=2
- Cambridge Public Schools. (n.d.). CPS January 2014 Kindergarten Lottery Statistics. Retrieved February 25, 2015, from http://cpsd.ss5.sharpschool.com/UserFiles/Servers/Server_3042785/File/departments/administration/frc/k_stats_2014-15.pdf
- Carnegie Foundation for the Advancement of Teaching. (n.d.). *Our Ideas: Using Improvement Science to Accelerate Learning and Address Problems of Practice*. Retrieved January 28, 2015, from <http://www.carnegiefoundation.org/our-ideas/>
- Childress, S., & Clayton, T. C. (2008). *Focusing on Results at the New York City Department of Education*. Boston, Mass: Harvard Business School Publishing.
- Coherence Framework*. (n.d.). Retrieved from <http://pelp.fas.harvard.edu/book/coherence-framework>
- Collaborative Coaching and Learning | BPE. (n.d.). Retrieved March 14, 2015, from <http://www.bpe.org/about/experience/ccl>
- Cossentino, J. (2005). Ritualizing Expertise: A Non-Montessorian View of the Montessori Method. *American Journal of Education*, 111(2), 211–244.
- Cummings, J. (2014, July 30). Consultants hit half-million at high rates, committee acknowledges “sticker shock.” *Cambridge Day*. Retrieved from <http://www.cambridgeday.com/2014/07/30/consultants-hit-half-million-at-high-rates-committee-acknowledges-sticker-shock/>
- Cummings, J. (2015a, January 9). Judging revised plans for better schools, committee says: Shows improvement. *Cambridge Day*. Retrieved from <http://www.cambridgeday.com/2015/01/09/judging-revised-plans-for-better-schools-committee-says-shows-improvement/>
- Cummings, J. (2015b, January 21). Despite calls against more administrators, district tries again for summer camp role. *Cambridge Day*. Retrieved from <http://www.cambridgeday.com/2015/01/21/despite-calls-against-more-administrators-district-tries-again-for-summer-camp-role/>

- Demographics and Statistics FAQ - CDD - City of Cambridge, Massachusetts. (n.d.). Retrieved December 29, 2014, from <http://www.cambridgema.gov/CDD/factsandmaps/demographicfaq.aspx>
- District Analysis and Review Tools (DARTs) - Curriculum, Instruction and Assessment - Cambridge (00490000). (n.d.). Retrieved December 27, 2014, from <http://profiles.doe.mass.edu/analysis/curriculum.aspx?orgcode=00490000&orgtypecode=5&>
- District Analysis and Review Tools (DARTs) - Finance - Cambridge (00490000). (n.d.). Retrieved December 29, 2014, from <http://profiles.doe.mass.edu/analysis/finance.aspx?orgcode=00490000&orgtypecode=5&>
- Dunaway, D. M., Kim, D.-H., & Szad, E. R. (2012). Perceptions of the Purpose and Value of the School Improvement Plan Process. *The Educational Forum*, 76(2), 158–173. <http://doi.org/10.1080/00131725.2011.652490>
- Edmondson, A. C. (2012). *Teaming : how organizations learn, innovate, and compete in the knowledge economy* (1st ed.). San Francisco: Jossey-Bass.
- Elmore, R. (2004). *School reform from the inside out : policy, practice, and performance*. Cambridge, MA: Harvard Education Press.
- Elmore, R. (2005). Accountable Leadership. *The Educational Forum*, 69(2), 134–142. <http://doi.org/10.1080/00131720508984677>
- Elmore, R. (2006, October). The Problem of Capacity in the (Re)Design of Educational Accountability Systems. Graduate School of Education: Harvard University.
- Elmore, R. F., & Fuhrman, S. H. (2001). Holding Schools Accountable: Is It Working? *The Phi Delta Kappan*, 83(1), 67–72. <http://doi.org/10.2307/20440062>
- Fernandez, K. E. (2011). Evaluating School Improvement Plans and their Affect on Academic Performance. *Educational Policy*, 25(2), 338–367. <http://doi.org/10.1177/0895904809351693>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). New York: Teachers College Press.
- Gallimore, R., Ermeling, B., Saunders, W., & Goldenberg, C. (2009). Moving the Learning of Teaching Closer to Practice: Teacher Education Implications of School- Based Inquiry Teams. *The Elementary School Journal*, 109(5), 537–553. <http://doi.org/10.1086/597001>
- Hattie, J., & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*, 77(1), 81–112. <http://doi.org/10.3102/003465430298487>

- Honig, M. I. (2013). From Tinkering to transformation: Strengthening school district central office performance. *American Enterprise Institute for Public Policy Research*, 4. Retrieved from <http://dev.education.washington.edu/sites/default/files/profiles/documents/honig/2013%20HONIG%20AEI%20Outlook%20From%20Tinkering%20to%20Transformation.pdf>
- Kaufman, T. E., Grimm, E. D., & Miller, A. E. (2012). *Collaborative school improvement: eight practices for district-school partnerships to transform teaching and learning*. Cambridge, Mass.: Harvard Education Press.
- Kegan, R., & Lahey, L. L. (2009). *Immunity to change: how to overcome it and unlock potential in yourself and your organization*. Boston, Mass.: Harvard Business Press.
- Langley, G. J. (2009). *The improvement guide: a practical approach to enhancing organizational performance* (2nd ed.). San Francisco: Jossey-Bass.
- Madison Metropolitan School District. (2014). 2013-2014 Annual Report on the Strategic Framework. Retrieved September 4, 2014, from https://www.madison.k12.wi.us/files/AnnualReport_0.pdf
- Madison Metropolitan School District Strategic Framework. (2013, July). Retrieved August 11, 2014, from <http://issuu.com/madisonschools/docs/mmsd-strategic-framework-7-25-13>
- Massachusetts Department of Elementary and Secondary Education. (2013, October). District Guide for the Development and Implementation of Accelerated Improvement Plans. Retrieved January 28, 2015, from <http://www.doe.mass.edu/apa/sss/dsac/FocusedPlanning.pdf>
- Massachusetts Department of Elementary and Secondary Education. (2014). *District Review Report: Cambridge Public Schools*. Retrieved from <http://www.doe.mass.edu/apa/review/district/reports/nolevel/2014-0049.pdf>
- Mintrop, H., & MacLellan, A. M. (2002). School improvement plans in elementary and middle schools on probation. *The Elementary School Journal*, 275–300.
- Moore, M. H. (1995). *Creating public value : strategic management in government*. Cambridge, Mass: Harvard University Press.
- MSAN - Minority Student Achievement Network. (n.d.). Retrieved September 1, 2014, from <http://msan.wceruw.org/>
- National Education Association. (2014). NEA Rankings And Estimates 2013-2014. Retrieved December 29, 2014, from <http://www.nea.org/assets/docs/NEA-Rankings-and-Estimates-2013-2014.pdf>

- Oakes, J., Quartz, K. H., Ryan, S., & Lipton, M. (2000). *Becoming good American schools: the struggle for civic virtue in education reform* (1st ed.). San Francisco, Calif.: Jossey-Bass.
- O'Day, J. A. (2002). Complexity, accountability, and school improvement. *Harvard Educational Review*, 72(3), 293–329.
- Park, S., Hironaka, S., Carver, P., & Nordstrum, L. (2013, May). Continuous Improvement in Education. Retrieved January 30, 2015, from http://cdn.carnegiefoundation.org/wp-content/uploads/2014/09/carnegie-foundation_continuous-improvement_2013.05.pdf
- Patterson, J. L., Purkey, S. C., & Parker, J. V. (1986). *Productive school systems for a nonrational world*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Reeves, D. B. (2006). *The learning leader: how to focus school improvement for better results*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Saphier, J. (2008). *The skillful teacher: building your teaching skills* (6th ed.). Acton, MA: Research for Better Teaching, Inc.
- Selected Populations (2013-14) - Cambridge (00490000). (n.d.). Retrieved September 1, 2014, from <http://profiles.doe.mass.edu/profiles/student.aspx?orgcode=00490000&orgtypecode=5&leftNavId=305&>
- Sowers, N., & Yamada, H. (2015, January). *Community College Pathways: 2013-2014 Descriptive Report*.
- Spillane, J. P. (1998). State Policy and the Non-Monolithic Nature of the Local School District: Organizational and Professional Considerations. *American Educational Research Journal*, 35(1), 33. <http://doi.org/10.2307/1163451>
- Talbert, J. E. (2011). Collaborative inquiry to expand student success. In J. A. O'Day, C. S. Bitter, & L. M. Gomez (Eds.), *Education reform in new york city : ambitious change in the nation's most complex school system*. Cambridge: Harvard Education Press.
- Talbert, J. E., Mileva, L., Chen, P., Cor, M. K., & McLaughlin, M. (2010). *Developing School Capacity for Inquiry-based Improvement: Progress, Challenges, and Resources*. Stanford University Center for Research on the Context of Teaching (2010, November). Retrieved from <https://v-www.baruch.cuny.edu/spa/researchcenters/documents/NVPSSAMProgramEvaluationNovember2010.pdf>

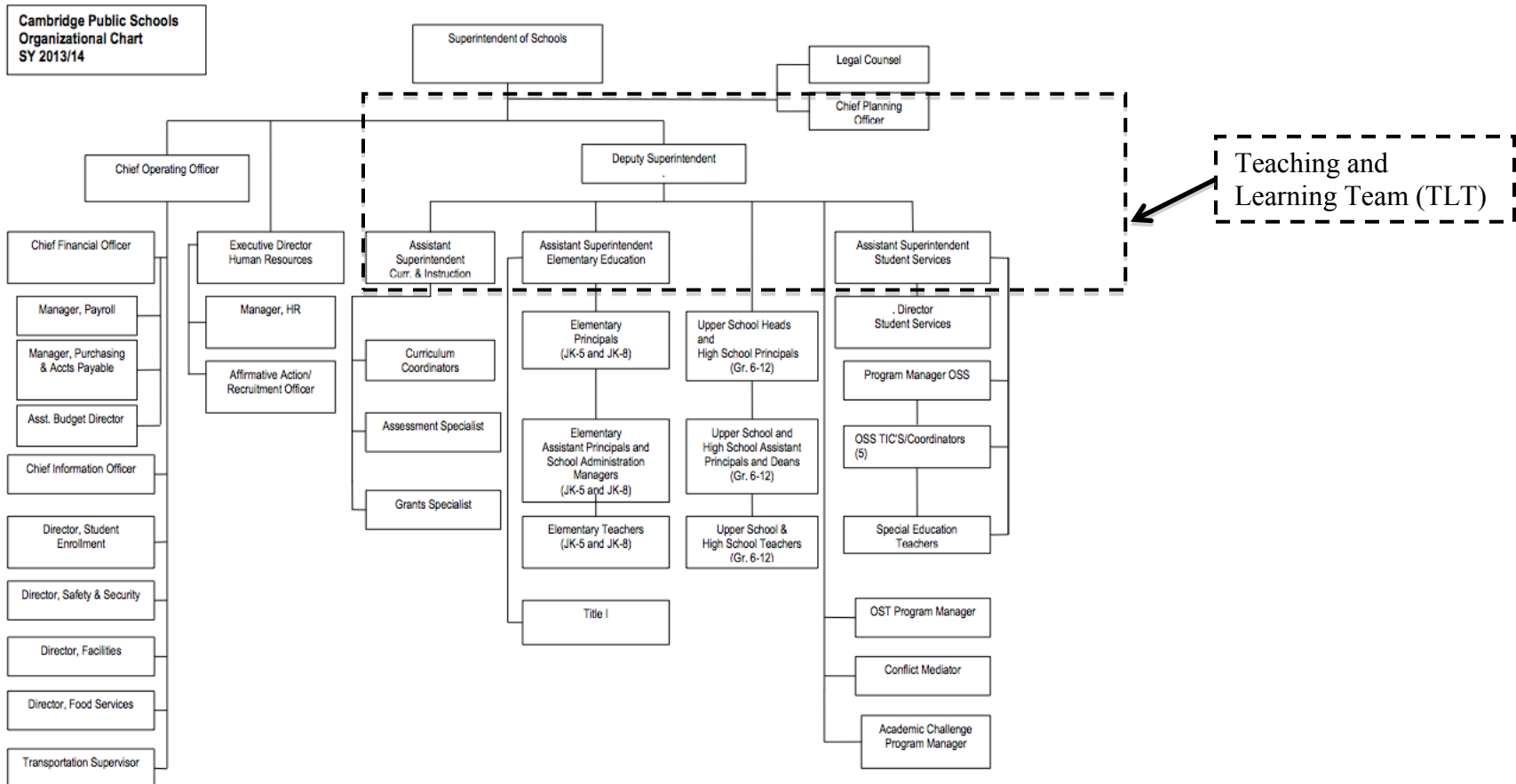
Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). Professional learning in the learning profession. *A Status Report on Teacher Development in the US and Abroad (Technical Report)*. Dallas, TX: National Staff Development Council. Retrieved from http://www.becker.k12.mn.us/sites/beckerschools/files/departments/2012/NSDCstudytechnicalreport2009_0.pdf

Who We Are - Carnegie Foundation for the Advancement of Teaching. (n.d.). Retrieved January 30, 2015, from <http://www.carnegiefoundation.org/who-we-are/>

WISEdash Public Portal. (n.d.). Retrieved September 1, 2014, from <http://wisedash.dpi.wi.gov/>

Appendices

Appendix 1: CPS Organizational Chart (Source: Cambridge Public Schools, 2014c)



Appendix 2: Strategic Project Memorandum of Understanding

To: Ed.L.D. Capstone Committee
From: Bob Ettinger, CPS Superintendent and CPS Asst. Supt. of C&I
Re: Strategic Project Proposal Memorandum of Understanding
Date: August 29, 2014

Project focus: Lead a collaborative design process with principals, teachers, and district leadership to develop and pilot district systems and structures for support and feedback on school improvement plans and processes.

Why this work?

School improvement matters: Improving schools is the core work of any School District. Unfortunately, research shows that principals and teachers often view the documents that supposedly guide improvement, school improvement plans, as exercises in compliance that have little impact on teaching and learning.¹¹ Some School Districts, however, are demonstrating a more exciting possibility. The districts of Madison, WI and Montgomery County, MD are connecting school improvement plans to ongoing systems and structures that support actual improvement in schools, and both systems have seen measurable increases in student learning.

Supporting school improvement is good for Cambridge: There are currently no district systems for feedback and support for school improvement plans in Cambridge and there are no clear processes to guide continuous improvement. On August 21, principals and coordinators participated in feedback protocols on their school improvement plans and were energized by the work. One principal wrote at the end of the meeting, “How can we do more of the kind of work we did today?”

Supporting school improvement is a good fit for me: Members of the Teaching and Learning Team (TLT) agree that my role as both insider (district employee) and outsider (graduate student) uniquely positions me to facilitate this work. Furthermore, this project will build upon my work for the August 21 meeting as well as my work at New Visions in New York last summer. Finally, this project will support my learning in each of my primary areas of learning: navigating political complexity, designing system level strategy, developing management skills, and furthering my understanding beyond middle school science and math.

Draft Project Outline:

Phase 1: Discovery (led by Bob), *Approx. August – early October 2014*

- Research best practices in districts across the country for SIPs and improvement processes (e.g. Madison, WI, Montgomery County, MD).

¹¹ e.g. Mintrop, H., & MacLellan, A. M. (2002). School improvement plans in elementary and middle schools on probation. *The Elementary School Journal*, 275–300; Buffett, T. (2005). *The ABCs of school improvement planning: Accountability, building-capacity and compliance* (Ed.D.). Harvard University, Ann Arbor. Retrieved from ProQuest Dissertations & Theses Full Text. (305001486);

- Conduct a literature review to better understand the impact of SIPs on practice and school improvement in general.
- Interview district leadership, principals, ILT members, and school councils to better identify their needs for improvement plans and processes. Questions could include:
 - What do feel are the purposes of current school improvement plans and processes?
 - What ideas do you have for improving district feedback and support structures for the creation and use of SIPs?

Phase 2: Design Process (collaboration between TLT and some principals/teachers), *Approx. early October 2014 – May 2015*

- Develop and model effective teaming practices
- Search for meaning in findings from Discovery Phase
- Generate ideas for possible district feedback and support systems and structures for school improvement plans and processes
- Implement prototypes of district feedback and support systems and structures during 2014-2015 school year
 - These could include principal collaboration protocols
 - Identify schools (maybe Level 3? Others?) to test ideas at school level
 - Gather feedback from participating schools

Phase 3: Reflection and Recommendation, *March 2015 – May 2015*

- Reflect on feedback from participating schools
- Reflect on prototype systems and structures for feedback and support of improvement
- Recommend framework for district-wide SIPs and improvement processes for 2015-16.

Measures of Success:

- Outputs:
 - A needs assessment for SIPs and improvement processes in CPS.
 - A summary of research and best practices in school improvement plans and processes.
 - Implementation and analysis of prototype systems and structures for district feedback and supports for school improvement plans and processes during 2014-2015 school year.
 - Recommendations for 2015-2016 district systems and structures for school improvement plans and processes that are sustainable, impactful, and balance a loose/tight system of governance.
- Short term outcomes:
 - Do principals, teachers, and district leadership have a common purpose for SIPs? [survey, interviews]

- Has the TLT modeled and implemented effective teaming, feedback, and improvement practices? [meeting agendas and artifacts, interviews, survey]
- Medium term outcomes:
 - Do principals and ILTs view the SIP as a meaningful document? [survey, interviews]
 - Are principals, ILTs, and school councils more engaged in the SIP process? [survey, interviews]
 - Have principals, ILTs, and district leadership built trust? [survey, interviews]
 - Have schools revised SIPs and put them into action? [meeting agendas and artifacts, interviews, survey]
- Long term outcomes (not assessed in 2014-15)
 - Increases in student learning in all schools as measured by state and local assessments

Resident's Role:

- Responsibilities:
 - Bob will lead the discovery phase (research and needs assessment)
 - Bob will facilitate the design phase in collaboration with the TLT and participating principals/teachers
 - Bob will facilitate the implementation of district systems and structures in collaboration with the TLT and principals/ILTs
- Staff who will work with Bob on the project:
 - Members of the Teaching and Learning Team
 - Principals
 - School instructional leadership team (ILT) members
 - Instructional coordinators
 - Coordinators from Office of Student Support
 - School councils
- Reporting relationship
 - Supervisor: Asst. Supt. of Curriculum and Instruction
 - Mentor: Superintendent

Privacy and Confidentiality:

- Bob will collect information through interviews and surveys
- Bob will conduct all research according to district policies.

In addition to the project above, Bob will participate in the following additional projects:

- Support the “Elementary Task Force”
 - Develop a shared vision for the elementary program in Cambridge and present to School Committee
 - Lead stakeholders in a design process for how to schedule and staff a School Day that balances time for core content areas, World Language and Kodaly Music, academic intervention, and common planning time for teachers
 - Make recommendations for the 2015-2016 CPS Budget
- Participate in the Early Childhood Task Force, sharing research findings when useful.
- Support the CPS budget process by redesigning school pages to include more words (e.g. goals, measures, and other succinct relevant information).

By signing below, I acknowledge discussion of and agreement with the information provided above, on pages 1 - 3. I also acknowledge that the Residency Site Representative signing below reserves the right to review the final Capstone product prior to any form of publication *beyond* the Ed.L.D. degree requirements (i.e., drafts and final Capstone deliverables for the L-300 course series; Capstone Defense; Capstone Symposium; and Harvard University libraries/archives).

Appendix 3: Example CPS School Improvement Plan, *Abridged*
“Plan Overview Section”

Vision
To prepare students to become resourceful, resilient learners who are able to construct cooperative, caring communities within the classroom, the school, and the world.
Theory of Action
If we provide the teachers with the necessary tools needed to build student skills through meaningful professional development, then the students will be able to read independently for understanding, respond precisely to writing prompts, solve with accuracy open-ended and multiple-choice questions, construct viable arguments, critique the reason of other’s and establish caring cooperative, communities.

Strategic Objectives				
Tier 2 instruction is naturally part of our school’s method of teaching. At risk students receive targeted interventions that meet RtI Tier 2 supplemental interventions. The work is individualized or can be designed for small group. Through early intervention and the use of developmentally appropriate materials, students will gain a concrete understanding of the curricular areas. The consistency and repetition of the method supports the child’s development from the concrete stage to abstract understanding. The sense of order and level of concentration developed by children builds independence and a positive sense of self. The following strategic objectives and initiatives are written with this pedagogy in mind.				
Build student Reading Skills and Writing Skills:Applying Reading Standards to Lessons, Developing Rubrics and Graphic Organizers to guide students in their Response to Reading and Answers to Open Response Questions	Develop students’ ability to think scientifically	Develop students’ math skills.	Establish Caring, Cooperative Communities	Build Teacher Capacity
Strategic Initiatives				
Implement with fidelity the Language Program JK-5	Increase hands on science experiences: *make observations *ask questions *create models	Provide mathematics and geometry lessons with fidelity and track students mastery of skills	Hold content area events for students to present work to families.	Teachers will use Albums to plan lessons that address standards
*Implement Tier One:-Daily Read Aloud-Explicit Small Group Reading (daily for below levelstudents)-Daily Ind. Reading *Implement Tier Two:- SupplementalIndependent work focused or Small Groups on:-phonics-comprehension-language-writing	Incorporate more writing into science: *use evidence to construct explanations of scientific concepts	Increase students’ independent time and strategic use of materials and works	Implement a school-wide Day of Service	Support teachers with CPSD Reading and Writing Curricula. Provide professional development to support the connection between the MA Reading Standards and Guided Reading










Utilize Reader's Notebooks in Grade K-5 to manage student independent reading, assess student comprehension etc.		Provide rigorous and meaningful problems for students to unpack, check for reasonableness of solutions and make connections.	Provide Parent Education around education and other topics of interest	Provide Professional Development to delve deeper into the math meaning beyond initial Presentations
Implement with fidelity the CPSD Units of Study in Writing. Incorporate Writing about Reading into students' daily routines.		Provide opportunities for students to develop a deep number sense and encourage discussion that promotes reasoning.	Engage Students, Families, Teachers and Administrators in academic and social/emotional goal setting process. The process will include the use of a protocol developed by Staff. Goals will be revisited periodically throughout the year.	Facilitate Professional Development on Tracking Student Progress in all curricular areas to strengthen RTI K-5 and to set high expectations for all students. Sessions will include guidance on the Scope and Sequence- in all content areas.
				Conduct learning walks with teachers, paraprofessionals, leadership team, special education teachers and interventionists to compare and contrast our low SES students with our non-low SES students.

2016 Outcomes

- 40% of Low SES students will reach proficiency on the 2014 ELA MCAS (achieved 58%)
- 68% of Low SES students will reach proficiency on the 2016 ELA MCAS
- 30% of special education students will reach proficiency on the 2014 ELA MCAS (achieved 41%)
- 51% of special education students will reach proficiency on the 2016 ELA MCAS
- 40% of Low SES students will reach proficiency on the 2014 Science MCAS (achieved 23%)
- 33% of Low SES students will reach proficiency on the 2016 Science MCAS
- 60% of all students will reach proficiency on the 2014 Science MCAS (achieved 52%)
- 65% of all students will reach proficiency on the 2016 Science MCAS
- 40% of Low SES students will reach proficiency on the 2014 Math MCAS (achieved 66%)
- 76% of Low SES students will reach proficiency on the 2016 Math MCAS
- 30% of special education students will reach proficiency on the 2014 Math MCAS (achieved 54%)
- 64% of special education students will reach proficiency on the 2016 Math MCAS

Data Analysis Section (Abridged; there are 3 additional data points for both strengths and areas for improvement not shown)

Strengths:

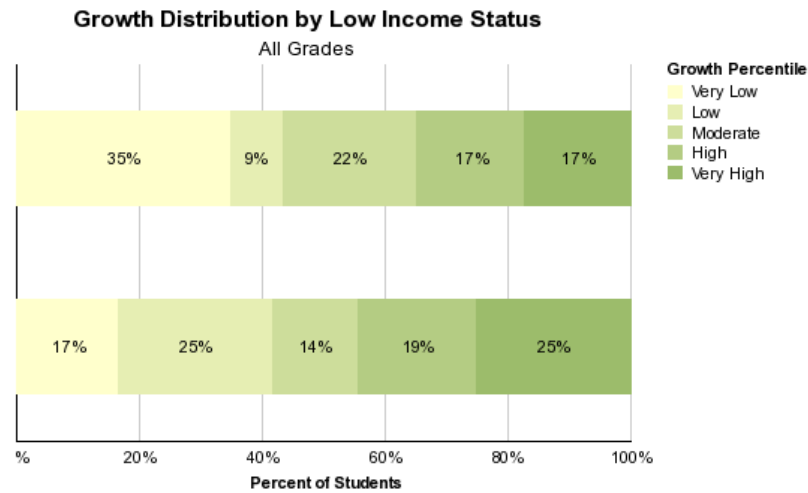
	Trend data that demonstrates an area of strength	What are your observations and your hypothesis of the cause of this area of strength?	What strategic objectives or initiatives could have led to this area of strength? How?																				
#1	<p>Math MCAS SGP 2014</p> <table border="1"> <thead> <tr> <th></th> <th>Median SGP</th> <th>N Students (SGP)</th> <th>% Proficient or Higher</th> <th>N Students (Ach. Level)</th> </tr> </thead> <tbody> <tr> <td> All Grades</td> <td>47</td> <td>59</td> <td>74</td> <td>92</td> </tr> <tr> <td> Grade 04</td> <td>70</td> <td>30</td> <td>66</td> <td>32</td> </tr> <tr> <td> Grade 05</td> <td>38</td> <td>29</td> <td>66</td> <td>29</td> </tr> </tbody> </table>		Median SGP	N Students (SGP)	% Proficient or Higher	N Students (Ach. Level)	 All Grades	47	59	74	92	 Grade 04	70	30	66	32	 Grade 05	38	29	66	29	<p><u>Observation:</u> The median SGP for Grade 4 Students was 70%</p> <p><u>Hypothesis:</u> The teachers and Math Coach collaborated to gain an understanding of the Math Common Core Standards.</p>	<p>Self Study resulted in an investigation of the math materials, which led to an increase in the amount of time for students to explore math manipulatives and deepen understanding of underlying concepts.</p>
	Median SGP	N Students (SGP)	% Proficient or Higher	N Students (Ach. Level)																			
 All Grades	47	59	74	92																			
 Grade 04	70	30	66	32																			
 Grade 05	38	29	66	29																			

#2	English Language Arts	N Included	% School	% District	<p><u>Observation:</u> 41% of students with disabilities scored proficient or above in ELA, surpassing our 2014 SIP goal by 11%.</p> <p><u>Hypothesis:</u> The special education teachers and the classroom teachers collaborated regarding individual students.</p>	<p>The RTI process/team meetings cultivated a stronger relationship between special educators and classroom educators.</p>
	Advanced	1	5	3		
	Proficient	8	36	28		
	Needs Improvement	7	32	42		
	Warning/Failing	6	27	28		
	Total Included	22				

Areas for Improvement

	<p>Trend data that demonstrates an area for improvement</p>	<p>What is your observations and hypothesis of the cause of this area for improvement?</p>	<p>What strategic objectives or initiatives could address this area for improvement? How?</p>																									
#1	<p style="text-align: center;">All Students ELA MCAS</p> <table border="1"> <caption>MCAS Achievement Level Data (2011-2014)</caption> <thead> <tr> <th>Year</th> <th>Advanced</th> <th>Proficient</th> <th>Needs Improvement</th> <th>Warning/Failing</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>5%</td> <td>47%</td> <td>34%</td> <td>14%</td> </tr> <tr> <td>2012</td> <td>13%</td> <td>33%</td> <td>32%</td> <td>21%</td> </tr> <tr> <td>2013</td> <td>13%</td> <td>58%</td> <td>26%</td> <td>3%</td> </tr> <tr> <td>2014</td> <td>15%</td> <td>52%</td> <td>26%</td> <td>7%</td> </tr> </tbody> </table>	Year	Advanced	Proficient	Needs Improvement	Warning/Failing	2011	5%	47%	34%	14%	2012	13%	33%	32%	21%	2013	13%	58%	26%	3%	2014	15%	52%	26%	7%	<p><u>Observation:</u> The percent of all students in the needs improvement and warning category in ELA has increased from 29% in 2013 to 33% in 2014.</p> <p><u>Hypothesis:</u> Teachers continue to learn and understand the ELA Common Core Standards.</p>	<p>Literacy Coach and Resource Teacher will provide Professional Development rooted in the ELA Common Core Standards.</p>
Year	Advanced	Proficient	Needs Improvement	Warning/Failing																								
2011	5%	47%	34%	14%																								
2012	13%	33%	32%	21%																								
2013	13%	58%	26%	3%																								
2014	15%	52%	26%	7%																								

#3	<p>Low income</p>	<p><u>Observation:</u> 35% of Low SES students scored in the Very Low category for SGP on the Math MCAS</p>	<p>The Leadership Team will continue to focus the school-wide learning walks on this population with an added layer of comparison with the Non-SES population.</p>
	<p>Not low income</p>	<p><u>Hypothesis:</u> Our focused work with this population began in Fall 2013.</p>	<p>Math Coach and Resource Teacher will provide Professional Development to delve deeper into the math meaning beyond initial Presentations.</p>



Action Plan Section, (Abridged; 2 action plans are not shown)

Action Plan for Strategic Objective/Initiative #1			
Year-long description, rationale, and goal			
Priority Strategic Objective/Initiative:	Mathematics: Develop student's math skills by providing mathematics and geometry lessons with fidelity and tracking students mastery of skills. Increase students' independent time and strategic use of materials and works. Provide rigorous and meaningful problems for students to unpack, check for reasonableness of solutions and make connections.		
Data that supports this initiative as a priority for your school:	35% of Low SES students scored in the Very Low category for SGP on the Math MCAS		
Student outcome at end of school year:	By Spring 2015: 71% of Low SES students will reach proficiency on the 2015 Math MCAS. 59% of special education students will reach proficiency on the 2015 Math MCAS		
Early Evidence of Change			
What are you trying to achieve in this initiative by Dec. 31?	By January 31: The percentage of Low SES scoring Not At-Risk on Symphony Math fall 2014 Universal Screener will increase from 67% (44/66) to 72% (48/66) as measured by the Symphony Math winter Universal Screener		
	By January 31: The percentage of Non Low SES students scoring Not At-Risk on Symphony Math fall 2014 Universal Screener will increase from 85% (88/103) to 90% (93/103) as measured by the Symphony Math winter Universal Screener.		
How will you know if a change is an improvement by Dec. 31?	Symphony Math screener scores will increase from Fall 2014 to Winter 2015.		
What changes can you make that will result in improvement? Describe your plan to implement this initiative over the whole school year (you will revisit this plan in Jan., 2015). Consider students with disabilities, ELLs, and students with high needs.	Implementation benchmark (process benchmark or early evidence of change benchmark)	Person/team primarily responsible	Date/frequency completed
	Implement weekly learning walks, (including: LC, teachers, interventionists, Special Educators, and paraprofessionals) collect data on specific subgroups, report out findings monthly to clusters.	Leadership Team	Weekly 10/14-5/15
	Facilitate weekly common planning meetings aligning the Common Core Math standards to math practices	Coaches and Classroom Teachers	Weekly 9/14-5/15
	Provide professional development on tracking students' progress towards mastery of math skills.	Coaches and Classroom Teachers	10 hours

	Provide professional development for teachers incorporating Standards for Mathematical Practice into Math lessons and activities	Coaches and Classroom Teachers	10 hours
	Provide professional development on the use of math materials and activities.	Coaches and Classroom Teachers	10 hrs

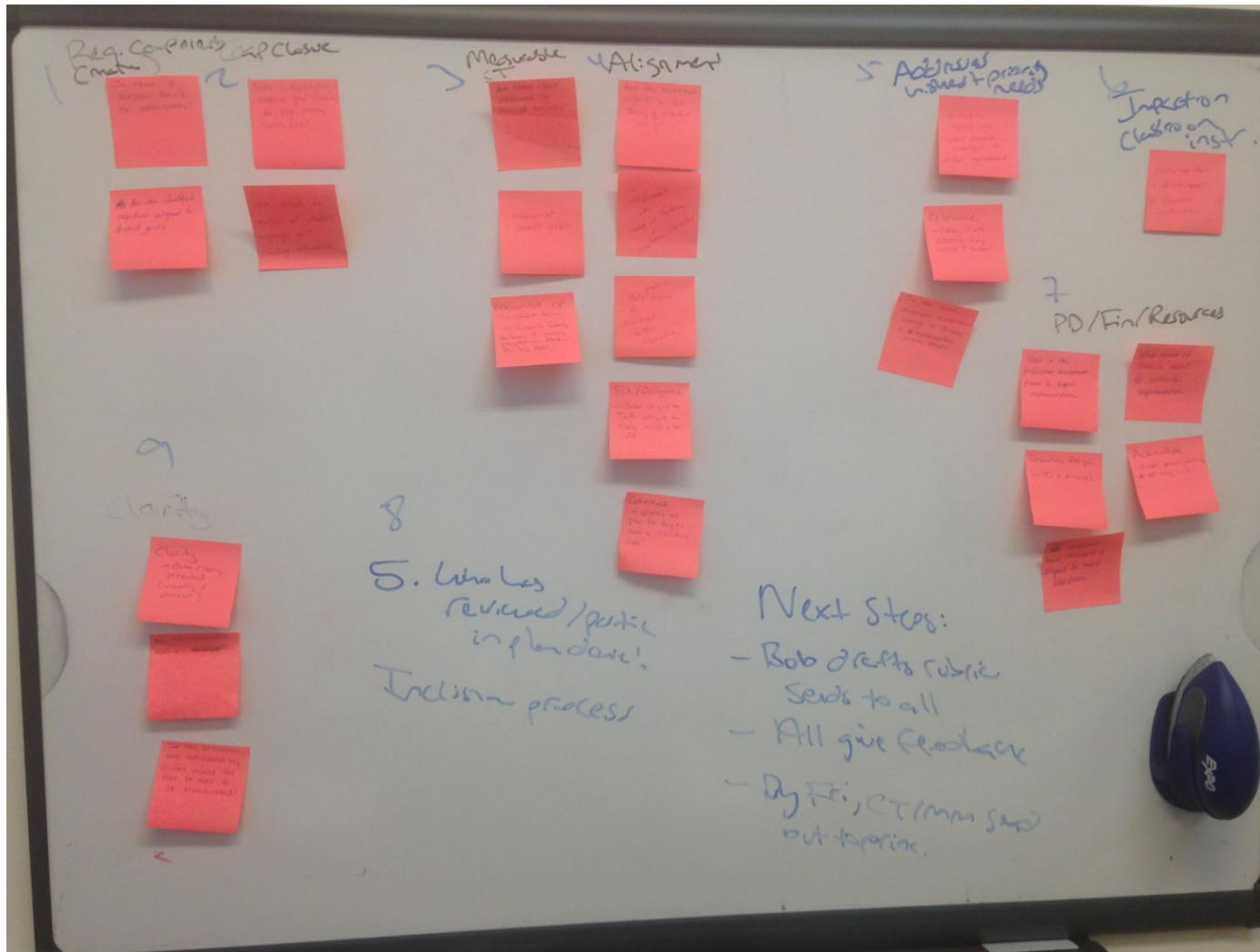
Additional Consideration Section

Additional Considerations:	Answers
1. What additional initiatives from your SIP is your school undertaking this school year (besides those described in the Action Plan above)?	Develop students' ability to think scientifically Build Teacher Capacity
2. Do you believe the list above is achievable this year? If not, please consider making changes to your improvement plan (Section 2).	Yes
3. What professional development will support all the initiatives your school is undertaking this year? Please identify the professional development included as an initiative on your improvement plan or other professional development that is not included in your improvement plan.	-Tracking Student Work -MKEA -Connecting the ELA Standards to Guided Reading -Math Overview for Paraprofessionals - Incorporating Standards for Mathematical Practice into Lessons and Activities -Social Curriculum and Childhood Development in the Classroom
4. How are you aligning your resources to support all the initiatives your school is undertaking this year?	Professional development is aligned to all of the SIP Initiatives, School based coaches (ELA/Math) are facilitating professional development. The purchase of materials was a collaborative effort between coaches, teachers and SAM. Individual classroom schedules were developed to provide optimum learning time for all students. Families, teachers and students each played a role in goal setting.
5. Who was involved in the creation of each part of your SIP? In what ways were they involved?	The Leadership Team (including the Principal, ELA and Math Coaches, Resource Teacher, and School Administration Manager) collaboratively wrote the SIP.

Self Reflection Rubric Section

Please complete before you turn in your SIP.		
Performance Levels: 4 = exceeds expectations; 3 = meets expectations; 2 = approaches expectations but revision required; 1 = not present		
Indicator	Performance Level (see above)	Comments
1. All sections of the SIP align to each other (i.e. data analysis, theory of action, strategic objectives, strategic initiatives, action plan)	1 2 3 [4]	
2. Data analysis is sufficient. The data analyzed focuses on the most important strengths and areas for improvement.	1 2 3 [4]	
3. Focused on gap closure. Data analysis, improvement plan, and action plan focus on gap closure for student groups (e.g. high needs, students with disabilities, ELLs)	1 2 3 [4]	
4. Objectives and initiatives focus on improving classroom instruction. The strategic objectives and initiatives are targeted at the instructional core..	1 2 3 [4]	
5. All sections are clear. Data is presented clearly and visually, objectives and initiatives are clearly described, and action plan steps are understandable.	1 2 3 [4]	
6. All required components are included. For example, one Action Plan focuses on mathematics.	1 2 3 [4]	
7. Early evidence of change benchmarks are measurable and actionable. Action Plan includes reasonable measures of gauging success by the end of December and includes clear implementation benchmarks to achieve them.	1 2 3 [4]	In Math and ELA measurement was noted as January 31, per District Determined Measures.
8. Alignment of resources makes the plan achievable. There is evidence that financial resources, human resources, and professional development have been aligned to support the plan.	1 2 3 [4]	
9. The process was inclusive. There is evidence that ILT members, School Council members, and other teachers/staff members were meaningfully involved in the development of the plan.	1 2 [3] 4	

Appendix 4: Photo of White Board from September 23, 2014, TLT Meeting: Affinity Mapping Indicators for SIP Rubric



Appendix 5: Example of Google SIP Rubric Completed Collaboratively By TLT Members

Indicator		CPS Person #1	CPS Person #2	CPS Person #3
Performance Levels: 4 = exceeds expectations; 3 = meets expectations; 2 = approaches expectations but revision required; 1 = not present				
		<p>Overall Feedback: There is great information in this plan and it is very clearly written. We especially appreciated the visual data analysis, the focus on just 3 strategic objectives (it's hard to pick just 3 and you did that well), and the clarity of the plan around Response to Intervention as a gap closure strategy. We also appreciate that you worked with your Instructional Leadership Team and your Steering Committee in the development of this plan.</p> <p>We are left with several questions:</p> <ol style="list-style-type: none"> 1. What is your strategy for raising the achievement of English Language Learners? This is not clear from the plan as it is currently written and we believe it is your most pressing issue. 2. You provided data in Section 1 that identified science of an area of focus for high needs students. What is your strategy for raising achievement in science, particularly for English Language Learners? This is not clear from the plan as it is currently written. 3. What, specifically, will you be looking for in your observations of math instruction in Action Plan #1? This would be a productive conversation between the principal and the math coach. 		
1. All sections of the SIP align to each other (i.e. data analysis, theory of action, strategic objectives, strategic initiatives, action plan)	Score	3.5		3
	Comments	All sections of the plan are aligned and make the case for a strong RtI model.	Wise decision on the part of the school to focus on three strategic objectives during this first year of tradition with a new leader. Alignment exists across and between sections of the plan. Has your school returned to a Humanities model?	Most sections show clear alignment -- particularly the data supporting the need for improved math instruction and RtI. I am less clear about the data supporting Action Plan #3: refining social studies units to include more writing.
2. Data analysis is sufficient. The data analyzed focuses on the most important strengths and areas for improvement.	Score	4		4
	Comments	Data analysis is sufficient and focuses on the most important strengths and areas of focus. Clearly displayed and easy to understand.	Data analysis charts and narrative match identified areas for improvement.	The data analysis is clear and probes key areas for improvement at the school. In particular, the visual aspect of the graphs makes the gains and declines easy to identify.

3. Focused on gap closure. Data analysis, improvement plan, and action plan focus on gap closure for student groups (e.g. high needs, students with disabilities, ELLs)	Score	3.5		3.5
	Comments	The plan focuses on the implementation of MIF as a Tier 1 strategy in the implementation of RtI.	The Refine Response to Intervention column suggests this objective is designed to respond to gap closures.	The data analysis clearly identifies achievement gaps between different groups of students. In addition, many short-term and year-long outcomes focus on those achievement gaps. Finally, the work of RtI is explicitly targeted at supporting students who are not yet at grade level.
4. Objectives and initiatives focus on improving classroom instruction. The strategic objectives and initiatives are targeted at the instructional core.	Score	2.5		2.5
	Comments	The school-wide implementation of MIF is a huge undertaking. It will be important to incorporate the changes in classroom instruction and learning goals for students as part of the PD for teachers as they learn this new curriculum. As mentioned above, I hope that the RtI model helps teachers to focus on Tier 1 instruction and differentiated instruction for students as well as interventions.	The Plan speaks to training, mtgs, etc but not specific actions that will be taken by teachers in the classroom.	Many of the initiatives mention classroom instruction, but the particular aspects for improvement in instruction are not clearly identified. For example, the short-term goal in Action Plan #1 is for teachers to receive intensive coaching on Math in Focus. Is there a specific instructional focus area for that coaching?
5. All sections are clear. Data is presented clearly and visually, objectives and initiatives are clearly described, and action plan steps are understandable.	Score	4		4
	Comments	The plan is clearly written, aligned and easy to understand.	Plan is written to the point --- graphic visuals are clear and support narrative.	The plan is clearly written.

6. All required components are included. E.g., one Action Plan focuses on mathematics.	Score	4		4
	Comments	All required components are included.	Yes.	All present.
7. Early evidence of change benchmarks are measurable and actionable. Action Plan includes reasonable measures of gauging success by the end of December and includes clear implementation benchmarks to achieve them.	Score			3
	Comments		Initiative #1: Measurable and Actionable (who is creating the survey) ; Initiative #2: Measurable and Actionable; Initiative #3; Why a SS intervention for an ELA curriculum. Is this a pilot?	Most of the action plans include measurable benchmarks. In Action Plan #1, a survey is identified as the tool to measure comfort with Math in Focus implementation (though it might be helpful to identify particular areas of focus here). Action Plan #2 includes a SMART goal for the amount of interventions received. It would be helpful to consider how you will assess evidence of growth on childrens' individual intervention plans as well. Finally, in Action Plan #3, How will you know if the Social Studies unit is actually improved?
8. Alignment of resources makes the plan achievable. There is evidence that financial resources, human resources, and PD have been aligned to support the plan.	Score	3		3
	Comments	Resources are identified.	Resources are not explicitly identified	Though it's not clear how the PD with [specific provider] supports the initiatives described in the Action Plans.
9. The process was inclusive. There is evidence that ILT members, School Council members, and other teachers/staff members were meaningfully involved in the development of the plan.	Score			2.5
	Comments	It is stated that the coaches, ILT and steering committee were involved in the writing of the plan. My question is how the entire staff was included.	There are a couple of references about the school's history of being inclusive and process oriented but there is no evidence of how the school community was brought together for the current plan.	There is not clear evidence to support this.

Appendix 6: Reflection on Action Plans Protocol Revised 1/10/15

Before the meeting:

- Decide which Action Plan(s) you hope to focus on. Do you wish to focus on all the action plans? Or do you want to go deeper into just one or two?
- Decide who will participate in the protocol. It is ideal if the participants are knowledgeable about the implementation of the plan.
- Evidence: Gather any evidence you have that your action planning is or is not having an impact on student learning and/or teacher practice. Be prepared to tape it to chart paper during the meeting. It is best if the evidence is as concise as possible (e.g. a simple chart)
- Materials: Be sure you have:
 - Several red, yellow, green, and blue sticky dots for *each* participant
 - Markers
 - Chart paper
- Print copies of the appropriate protocol below (pages 2 – 3 for a 90 minute protocol; pages 4 – 5 for a 60 minute protocol)
- Chart Paper: For each Action Plan that you wish to consider, draw up two pieces of chart paper that look like those below, and fill in the bulleted lists using the information from your action plan.
 - *Note: Many Action Plan templates include both actions and impact throughout the “Early Evidence of Change” section. To differentiate between an “action step” and “impact”, an “action” is something for which you can ask, “Did we do it or not do it?” An “impact” is something for which you can ask, “What did we hope would happen as a result of the actions we hoped to take?”*

Chart #1: Actions

<p>Actions: What we said we would do</p> <ul style="list-style-type: none"> • Bulleted list of the action steps from the action plan (what, who, and when) • <i>Note: be sure to leave space between the action steps so that participants can add sticky dots later.</i>
--

Chart #2: Impact

Impact on student learning and/or teacher practice:	
We hoped	Actual evidence
<ul style="list-style-type: none"> • Bulleted list of impact you hoped to see from action plan 	<p><i>Leave blank</i></p>

Reflection on Action Plan Protocol Version #1 – 90 minutes [*Note: I also developed a 60 minute version that is not included here*]

Purpose: To develop a shared understanding of what agreed upon actions have been completed in the school's Improvement Plan (what?), what impact those actions are having (so what?), and what needs to either be revised in the original plan, or attended to more specifically going forward.

Roles:

Facilitator – who moved the group through the process, facilitates the whole group conversation, and helps the group reach agreements.

Presenter – who presents the initial information and gives context, answers clarifying questions, takes notes on the group conversation in part 3.

Group Members – who ideally share responsibility for creating the plan and implementing the actions in the plan.

Recorder – who captures important ideas on chart paper.

Time Keeper – who helps the group stay on schedule.

Review the protocol and group norms – add and discuss an additional norm for this process: *Failure is okay. Reflecting on failure is the only way we can learn.* **(15 minutes)**

What? The group gathers information (15 minutes)

Review chart of Actions (#1) and Impact (#2).

- Everyone reviews the charts independently.
- Clarifying questions.
- Group member individually place green, yellow, red or blue sticky dots next to each action on Chart Paper #1, without talking to each other, and according to the following rule:
 - Green = we did or mostly did what we said we'd do
 - Yellow = we kind of did what we said we'd do
 - Red = we didn't do or barely did what we said we'd do
 - Blue = don't know
- Everyone silently writes their own perspectives on chart paper #2 about changes that have occurred as a result of actions. If anyone has formal evidence (quantitative or qualitative data), they can tape that data to the chart paper. It is okay to respond to other people's statements on the chart paper in writing.

So What? The group makes meaning of the information (30 minutes)

Write, pair, share about observations.

- Independently and silently, write an answer to this question: What do you see? What patterns do you notice? (Observations only, no opinions). (5 min)
- Share ideas with a partner. (3 min)
- Share as a whole group, while someone scribes on chart paper. (7 min)

Write, pair, share about explanations.

- Independently and silently, write an answer to these questions: Why do you think those patterns exist? How are you reading this; what meaning are you making of the information? (5 min)
- Share ideas with a partner. (3 min)
- Share as a whole group, while someone scribes on chart paper. (7 min)

Facilitator's Note: if Chart 1 is mostly "red," it probably makes sense to focus on why the actions weren't completed. If Chart 1 is mostly "green" or "yellow," then it probably makes sense to focus on why you are or aren't seeing impact.

Now What? The group makes recommendations about next steps (15 minutes)

Write, pair, share about next steps.

- Independently and silently, write an answer to this question: What are our next steps? What should we keep doing? What should we stop doing? What should we start doing? What should we do differently? (5 min)
- Share ideas with a partner. (3 min)
- Share as a whole group, while someone scribes on chart paper. (7 min)

Reflection by Presenter (10 minutes)

Presenter reflects back to the group, saying what he or she heard, and offering his or her thinking about possible changes to the action plan.

Debrief the Process (5 minutes)

Share and record "pluses" (things that went well) and "deltas" (things you would like to change for next time).

Appendix 7: SIP Pilot Program Information Sheet sent to all principals, Oct 14, 2014



CPS School Improvement Pilot Program

Cambridge Public Schools is currently revising the systems for school improvement planning this year. Although writing a great plan is an important starting point, **the real work of school improvement is based on what you *do* with the plan.** We are hoping to pilot district supports of school improvement processes at 2 – 3 schools during the 2013-2014 school year. Our Harvard resident, Bob Ettinger, will be leading this work with participating schools.

Participating schools will receive support from Bob in:

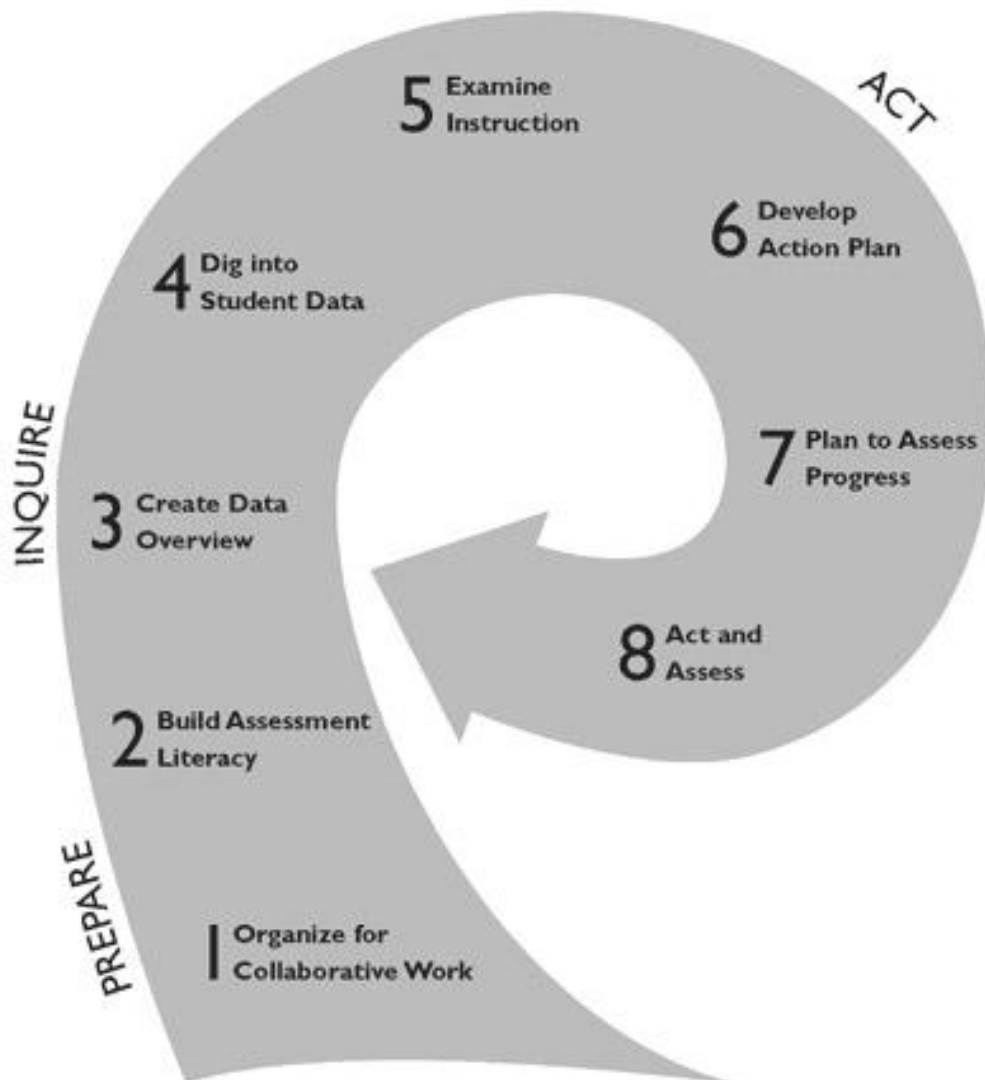
- **Planning and facilitating** ILT, School Council, and possibly grade level team meetings that are focused on improvement as appropriate.
- **Gathering and analyzing formative data** to identify progress made towards goals on a continuous basis.
- **Drafting and revising** school improvement plan and action plans based on data
- **Applying the latest research** on improvement processes from education and other sectors.

The **commitment** needed from participating schools includes:

- The principal agreeing to meet with Bob for 30 minutes every other week.
- Inviting Bob to ILT and School Council meetings.
- Giving Bob opportunities to meet with coaches and teachers as appropriate.

If you are interested in participating, please email Bob Ettinger, the Assistant Superintendent for Elementary Education and the Deputy Superintendent by October 18, 2014.

Appendix 8: Data Wise Improvement Process (Boudett et al., 2013)



Appendix 9: Example Agenda for School Improvement Pilot School at School A

December 3, 2014, 8:40 AM - 10:00 AM EST

Topic: Step 3 of Data Wise

Participants:

Facilitator: **Bob**

Note taker: **Math Coach**

Time keeper: **Teacher 1**

Norm checker: **Teacher 2**

Meeting objectives:

- **Better understand SGP and how it is calculated**
- **Identify a priority question based on math data from grade**

To prepare for this meeting, please:

- **Read chapter 3 in Data Wise**

Schedule [60 minutes]

Time (Approx!)	Mins. (Approx!)	Activity
	5	Review objectives and identify roles
	10	Hopes and Fears about engaging in this process together over this school year... write on post its individually and then share together
	10	Review how SGP works. Bob will put together a couple slides and/or questions.
	15	Present SGP and P/A data disaggregated by SWD and SW/oD. Write low-inference observations on sticky notes Chart and categorize through affinity map Write, pair, share: What implications are there for your thinking/practice?
	10	Present OR vs. SA vs. MC with state comparisons by year. Grade 4 and 5 data... Low inference observations on sticky notes Chart and categorize
	20	Question formulation technique protocol (p. 228 of Blue Book) to get to a priority question
	5	Plus/delta

Appendix 10: Plan for School B ILT Meeting November 20, 2014

Today's Objective: To develop plans for collecting evidence about our current instructional practices in the area of writing about reading in ELA.

Longer Term Plan:

- *November ILT Meeting:* plan how to collect evidence about current practice
- *Between November and December meeting:* collect evidence about current practice
- *December ILT Meeting:* review evidence about current practice and identify a specific “problem of practice” in the area of writing about reading; create action plan to address that problem of practice, including short-term, medium-term, and long-term outcomes
- *Rest of year:* continuously analyze progress towards those outcomes in the action plan
 - This will be determined more specifically, hopefully before the December meeting
 - Will involve ILT and cluster meetings in some way, specifics TBD

Pre-Work:

- Review latest draft of School B SIP, including Action Plan

To Do List:

- Agenda Finalized
- Copy Agenda

Task	Facilitator	Time
Describe objectives for the day and longer term plan for ILT... Need to describe WHY we are focusing on LCP and PoP... a “problem” is something that you solve. Name that LCP = “student focus area” and PoP = teacher focus area. <ul style="list-style-type: none"> ● Need to focus a little longer on the “why” ● Not just establishing what it SHOULD look like, but also monitor, track, discuss, follow through on how it IS happening ● Also, connecting the work to specific teacher behaviors ● Reflecting continuously on both student work and teacher 	Principal Intern	5 min

<p>practice</p> <ul style="list-style-type: none"> ● Also connect to feedback about SIP and how to make revisions to SIP 		
<p>Review Data Wise Process.</p>	<p>Math Coach</p>	<p>5 min</p>
<p>Come to consensus around Learner Centered Problem in ELA :</p> <ul style="list-style-type: none"> ● Describe work done over the previous year in identifying a “learner-centered problem” (LCP). ● Share draft LCP with the group: “Students are struggling to write about reading grade level texts.” because... ● Not that we’re not doing it... we want to MASTER it! 	<p>ELA Coach</p>	<p>5 min</p>
<p>Whole Group Affinity Protocol: What would effective instruction look like to teach students to improve in this particular area?</p> <ul style="list-style-type: none"> ● Independently, write specific teacher behaviors down on separate post-it notes. ● Whole group places post-its on white board ● Work as whole group to sort into categories and give each category as a name. 	<p>Program Manager</p>	<p>25 min</p>
<p>Envisioning Effective Practice at Each Grade band:</p> <ul style="list-style-type: none"> ● Need to define groups ahead of time? ● Break into grade-band groups (is this possible on ILT?) of K-1, 2-3, and 4-5 ● Discuss: What would effective practice look like at your grade band in each of the areas identified on the affinity map. ● Chart on chart paper. ● Note: This should focus aspirationally on what effective practice <i>should</i> look like... not necessarily what it <i>does currently</i> look like 	<p>ELA Coach</p>	<p>15 min</p>

<p>Introduce design challenge: How could we collect evidence about the extent to which these dimensions of effective practice are actually happening at each grade band?</p> <ul style="list-style-type: none"> ● Stay in grade-band groups. ● Consider challenges: <ul style="list-style-type: none"> ○ What kind of evidence is reasonable to collect at your grade band? How comfortable are teachers with peer observations? Could you collect artifacts? Videos? Surveys? ○ <i>Does everyone provide varied opportunities for writing about reading regularly and consistently?</i> ● On chart paper, describe: <ul style="list-style-type: none"> ○ What evidence would you collect? ○ Who will collect it? ○ How? ○ When? 	Bob	30 min
Present plans and offer feedback as time allows.	Principal	15 min
Whole group discussion: Are we moving too fast? Is it reasonable to hope to collect evidence before the December ILT meeting?	Bob	10 min
Pluses and deltas to reflect on process		5 min

Appendix 11: Cambridge Public Schools SIP Survey, administered Jan - Feb 2015

Note: Questions in *italics* were asked on the teacher/other survey, not on principal survey.

1. *At which school do you primarily work?*
 - a. *Drop-down menu of all schools in CPS*
2. *What is your role at your school?*
 - a. *Teacher*
 - b. *Not a classroom teacher (e.g. coach, AP, etc.)*
3. *Are you a member of your school's Instructional Leadership Team?*
 - a. *Yes*
 - b. *No*
4. *Were you involved in drafting your school's SIP?*
 - a. *Yes*
 - b. *No*
5. About how often do you think about what is written in your school's SIP?
 - a. Never
 - b. Once a year
 - c. Once a semester
 - d. Once a quarter
 - e. Once a month
 - f. Once a week
 - g. More than once a week
6. About how often do you go back and check to see if you are completing the steps and meeting the goals in your school's SIP?
 - a. Never
 - b. Once a year
 - c. Once a semester
 - d. Once a quarter
 - e. Once a month
 - f. Once a week
 - g. More than once a week
7. Approx. how many times was your SIP revised this school year ('14-'15)?
 - a. 0
 - b. 1
 - c. 2 - 3
 - d. 4 - 5
 - e. 6 - 10
 - f. 11 - 15
 - g. More than 15
 - h. I don't know

8. Which of the following did you use as reasons to revise your SIP? (Check all that apply)
- a. Feedback from district staff
 - b. Feedback from school staff
 - c. MCAS data
 - d. Other data besides MCAS
 - e. Early evidence of change data collected during the school year
9. Think about the School Improvement Plan (SIP) at your school *this school year* (2014 – 2015). How accurate are the following statements for you?

	Accurate	Somewhat accurate	Somewhat inaccurate	Inaccurate	I Don't Know or Doesn't Apply to Me
I know what is written in our school improvement plan.					
Our school's SIP is a valuable document at our school.					
I contributed my ideas to our school's SIP.					
The programs or initiatives we implement connect to our SIP.					
Our school received feedback from the district on our SIP.					
The feedback our school received on our SIP helped improve the focus and actionability of our SIP.					
The objectives and initiatives in our SIP improve the way most teachers at our school teach.					

<i>The objectives and initiatives in our SIP improve the way that I personally teach (please check “doesn’t apply” if you are not a teacher).</i>					
The objectives and initiatives in our SIP improve what students learn.					
Our school’s SIP is a plan that “sits on the shelf.”					
I have the skills and knowledge I need to write a high quality SIP.					
I have the skills and knowledge I need to use our SIP in an ongoing process of improvement (i.e. not having the SIP just sit on the shelf).					
The support provided by the district for writing the SIP was sufficient.					
The support provided by the district for using the SIP (i.e. not having the SIP just sit on the shelf) was sufficient.					
I am accountable for ensuring that our SIP is written and turned in.					
I am accountable for ensuring that our SIP is high quality.					
I am accountable for using our SIP in an on-going process of improvement (i.e. not having the SIP just sit on the shelf).					
I am accountable for meeting the goals we set in our SIP.					

10. How does your experience with school improvement plans this year (2014 – 2015) compare to last year (2013 – 2014)?
 - a. This year's process is more likely to improve the quality of teaching and learning than last year's process
 - b. This year's process is equally likely to improve the quality of teaching and learning as last year's process
 - c. This year's process is less likely to improve the quality of teaching and learning than last year's process
11. Which aspects of this year's SIP process, if any, make it more likely to improve the quality of teaching and learning? [Open response]
12. Which aspects of this year's SIP process, if any, make it less likely to improve the quality of teaching and learning? [Open response]
13. What are the biggest barriers to using School Improvement Plans to improve the quality of teaching and learning? [Open response]
14. What suggestions do you have for improving the School Improvement Planning process in CPS? [Open response]
15. What, if anything, are the most significant improvements that have occurred at your school as a result of this year's SIP process? [Open response]
16. About how much time did you spend writing, revising, or reflecting on your school's SIP this year (2014 – 2015)?
 - a. 0 – 2 hours
 - b. 2 – 5 hours
 - c. 5 – 10 hours
 - d. 10 – 20 hours
 - e. 20 – 40 hours
 - f. More than 40 hours
17. Given your answers to the last two questions, to what extent do you think the time you invested in the SIP was a good use of time?
 - a. A good use of time
 - b. A somewhat good use of time
 - c. A somewhat bad use of time
 - d. A bad use time
18. Why did you choose your answer to the previous question? [Open response]
19. Is there anything else you would like to add about your experience with SIPs this year? [Open response]