

School Leadership and Instructional Improvement in CSR Schools

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INTRODUCTION

The widespread adoption of comprehensive school reform (CSR) models is one of the most dynamic trends in American education today. Though their designs vary considerably, all CSR models share a common goal of improving student achievement by improving instruction. School leadership plays an integral role in many CSR designs. For example, many models rely upon leaders to deliver the program to teachers, and to support and monitor implementation. Some models accomplish this by requiring participating schools to add new leadership positions, while other models expand and redefine the roles of existing leaders such as principals and assistant principals (Datnow and Castellano, 2001; Supovitz and Poglinco, 2001). Recent research indicates that leadership functions are often distributed across multiple leaders in schools implementing CSR programs (Camburn, Rowan and Taylor, in press; Datnow and Castellano, 2001; Supovitz and Poglinco, 2001). This paper attempts to expand our understanding of distributed leadership within the context of comprehensive school reform. Using qualitative and quantitative data from a large-scale longitudinal study of three of America's most widely disseminated CSR programs, we investigate the role of leadership practice in supporting instructional improvement by examining interactions between school leaders and teachers. We also examine a number of outcomes thought to be associated with these interactions such as teachers' understanding of program goals, their motivation for improvement, and their effort at improving their instruction. In particular, this paper investigates three questions:

- How does leadership support instructional improvement in schools implementing CSRs?
- How are leadership functions distributed in schools implementing CSRs, and how are such functions enacted by school leaders and teachers?
- How are leadership activities as configured in CSR schools related to teachers' engagement in instructional improvement?

We used a mixed-method approach to address our questions, drawing upon qualitative and quantitative data from the Study of Instructional Improvement (SII), a program of research which is investigating schools' implementation of three widely-adopted CSR models: America's Choice, Success for All, and Accelerated Schools.

Background

Recent interest in the area of distributed leadership in schools is a reflection in part of perceived shortcomings of earlier research on school leadership. Until the mid-1980s, research on school leadership focused almost exclusively on principals and the "traits" of effective leadership, including principals' abilities, behavior, and interpersonal style (Bridges, 1982; Yukl, 2002). Within this long-standing research tradition, leadership was treated as the exclusive province of principals who influenced others by engaging in particular behaviors or behavioral styles. This research tradition generated a substantial body of empirical evidence that strong instructional leadership from principals is positively associated with successful programmatic change and instructional improvement (see for example, Leithwood and Montgomery, 1982; Bossert, Dwyer, Rowan and Lee, 1982; Hallinger and Murphy, 1985).

Associating leadership with a single person (the principal) is seen by many to be a major shortcoming of this literature. Beginning in the mid-1980s, research on school leadership began looking to other actors in schools (namely teachers) as potential providers of instructional leadership (Rowan, 1990; Smylie and Denny, 1990; Hart, 1995; Heller and Firestone, 1995). This shift, from school leadership being the sole province of principals, to notions of shared leadership among principals and teachers appears to reflect educational reforms of the time such as site-based management, career ladders for teachers, and mentor teacher programs. In their conceptual framework of distributed leadership, Spillane, Halverson, and Diamond (2004) conceive of leadership tasks as being socially distributed across multiple actors in schools including formal leaders, informal leaders, and teachers. This kind of social distribution of leadership functions is

reflective of the designs of many CSR programs and has been observed in schools implementing such programs (Camburn, Rowan and Taylor, in press).

The emphasis in the earlier literature on traits and behaviors is also thought to be a shortcoming by a number of researchers. Certainly these things are important constituent elements of school leadership, but they are thought to encompass an overly narrow range of leadership dimensions. Rather than merely focusing on *what* leaders do, Spillane, Halverson, and Diamond (2004) argue for a broader focus on what they call leadership “practice” which encompasses the interaction of leaders and followers as well as the socio-cultural context within which those interactions occur.

...rather than seeing leadership practice as solely a function of an individual’s ability, skill, charisma, and/or cognition, we argue that it is best understood as a practice distributed over leaders, followers, and their situation (Spillane, Halverson, and Diamond, 2004, page 18).

Spillane, Halverson, and Diamond (2004) further argue that leadership practice is not only distributed across people, but is also spread across “designed artifacts” and various forms of communication that convey information from leaders to followers. As we discuss below, we have observed the use of a range of artifacts and forms of communication that have been used by leaders in CSR schools to convey expectations and impressions of observed practice to teachers implementing CSR designs.

We draw on a number of key concepts from the work of Spillane, Halverson, and Diamond (2004) to frame this work. First, our conception of leadership is not limited to the principal or any other single actor, but rather, encompasses multiple actors in schools including incumbents of formal leadership roles as well as teachers. Though we look closely at *what* leaders say they do, as evidence of leadership, we also look closely at interactions between leaders and followers. We consider how leaders and teachers interpret and “enact” particular leadership functions through their descriptions of daily practice. In this sense, our conception of leadership is reflective of Spillane, Halverson,

and Diamond's (2004) notion of leadership practice. Our study design captures interactions between leaders and followers by collecting reports about these interactions from both parties. Our perspective on leadership also considers how the socio-cultural context gets reflected in the interactions between leaders and followers. And finally, we consider the role of designed artifacts and other forms of communication in investigating the exercise of leadership practice in schools implementing CSR programs.

Mixed Method Approach

For this study, we employed a mixed-method approach, which uses quantitative and qualitative analyses to investigate distributed leadership and its potential for engaging teachers in improving their instructional practices. We used parallel/simultaneous mixed method design and analysis (Tashakkori & Teddlie, 1998) to complement and triangulate our inferences drawn from two different types of data on school leadership perceived by teachers and leaders. Quantitative data used for this research includes surveys of school leaders and teachers in 119 mainly high poverty public elementary schools using a Teacher Questionnaire and the School Characteristics Inventory (SCI). The qualitative data we use in this study are primarily drawn from a nested set of case studies of schools in district and state environments—i.e. school leader and teacher interview data in 14 high poverty schools in 6 districts. The quantitative and qualitative samples also include comparison schools that are not using one of the 3 CSR models under study but serve similar communities and student populations as program schools.

Qualitative Data and Method

To investigate how leadership is distributed and enacted in CSR schools and the potential outcomes of such distribution, we use teacher and leader interview data. The sample includes fifty-two leaders and fifty-eight 1st or 4th grade teachers interviewed in the spring of 2002. Respondents worked in one of 4 AC schools, 3 ASP schools, 4 SFA schools, or comparison schools. We use thirty-three teachers and thirty leaders in four AC schools and four SFA schools in this paper (see Table 1 for case study school characteristics). All interview text was transcribed, cleaned, coded and entered into a NUD*ist database. Additionally, the field staff completed write-ups of each school using a standard analytic frame for focusing field notes and judgments derived from interviews,

on our key questions. We conducted cross case analyses looking at school leaders' as well as teachers' reports of their interactions with one another. We used NUD*IST to produce cross case reports containing text coded for teacher-leader interactions around such tasks such as mentoring, modeling instruction, monitoring instruction or collective work focused on instruction. Our coding system and the NUD*IST data base are structured to correspond to some variables used in the survey questionnaires. We also used the standard case write ups that field staff completed for each school to gain a holistic perspective on the issue of teachers' interactions with leaders, and the influence such interactions had on teachers' work. Finally we used NUD*IST to produce and read cross case reports by teachers, about their learning, change, and other aspects their instructional improvement efforts.

Quantitative Data and Method

Data and Sample . To investigate the relationship between school leadership and teachers' engagement in instructional improvement, we used the survey data collected during the spring of 2002, the second year of the Study of Instructional Improvement (SII). The quantitative data includes surveys of school leaders and teachers in 114 elementary schools in 17 U.S. regions. In this study, we examined only the data on teachers who taught language arts in the year of the survey. The final sample used in this study is 2217 teachers in 114 schools. For more details on the characteristics of the teachers and schools in our sample see Table 2 in Appendix.

Measures . We created three outcome measures to assess the degree of teachers' engagement in instructional improvement—clarity of expectations; motivation for improvement, and effort at improving instruction. We used IRT scaling to create the clarity of expectation and the improvement effort measures. The motivation measure was constructed by summing up the scores of the three items (See Table 3 in Appendix for survey items). These measures were then z-scored for the HLM analysis.

Two key predictor variables measure teachers' opportunities to improve their practice. The first measure indicates the frequency with which teachers received instructional guidance by interacting with instructional leaders. The second measure indicates the

frequency of teachers engaged in collegial interactions (how frequently teachers observed another teacher or were observed by another teacher). The survey items of these two measures are presented in Table 4 in the appendix. Various teacher and school level control variables are also described in the appendix.

For the quantitative analysis, we conducted two-level Hierarchical Linear Model(HLM) analysis (Raudenbush & Bryk, 2002). Please see Appendix for the details of our HLM models.

HOW KEY INSTRUCTIONAL LEADERSHIP FUNCTIONS ARE DISTRIBUTED AND ENACTED IN CSR SCHOOLS

In a recent study of schools engaged in one of three CSR models—AC, SFA or ASP—Camburn, Rowan and Taylor (2004) measured instructional leadership using four sub-scales: developing instructional capacity; monitoring improvement; setting instructional goals; and coordinating curriculum. Camburn and his colleagues found that generally, principals and CSR coaches or facilitators engaged in more instructional leadership than leaders in all other roles—i.e. roles such as Title I coordinators and mentor teachers who we typically assume provide instructional leadership. But CSR coaches or facilitators reported spending more time than any other leaders, including the principal, on “developing instructional capacity.” That broad leadership function includes such tasks as working with teachers to share information or advice about instruction; to discuss student work during or after classroom observations; to providing staff development; and to examine testing data. Our quantitative data show that CSR coaches or facilitators specialize in this kind of development work with teachers, while principals focus more on setting instructional goals and monitoring improvement. Here it appears that CSR coaches are free to play a supportive role, while principals play a more evaluative one.

In this section we build on these SII quantitative findings and describe in more detail how key instructional leadership functions—especially “developing capacity “ and “monitoring improvement” were enacted in some case study schools. We focus primarily on SFA and AC cases as each of those designs target instruction more directly than does

the ASP design. In those case site schools the process by which school leaders enacted model designs tended to “stretch” the monitoring and capacity-developing leadership functions across various design elements or tasks. For example, the two designs specified such tasks as modeling instruction, observing classrooms, or leading teachers’ collective work on instructional issues. Leaders across our cases used these tasks and the time such tasks structured, to monitor instruction on some occasions, and to build instructional capacity on other occasions. These monitoring and capacity building functions also served to build staff commitment to model practices, or to keep staff focused on implementation. In that sense, the leaders using these two functions were also serving as motivating forces on teachers as they engaged in improving their practice. School leaders used multiple artifacts--pacing schedules, or monitoring calendars for one example; student work, or model related assessment forms, for another--to enact the two overarching instructional leadership functions.

Finally, like the findings in Camburn et al., our case study data show the monitoring and instructional capacity-building functions were distributed across different roles—CSR coaches or facilitators reported spending more time on “developing instructional capacity” while principals or vice principals tended to say they focused more on monitoring instruction (among other activities). But in our cases, there were inconsistencies between reports of formal role definition and how leaders described their daily practice. As we looked more deeply into how the work was distributed across the leadership teams in case site schools, we found that while CSR coaches said they did not “formally” monitor teachers’ instruction, descriptions of their daily practice suggest they did: By their own descriptive accounts, CSR coaches and facilitators monitored instruction as well as developed instructional capacity, though they did the former with ambivalence, caution and sometimes surreptitiously. In doing so enactors—coaches and administrators--were distributing *authority* for instructional decisions beyond the principal and the discretion of individual teachers, and may have been changing school norms subtly, without drastically destabilizing traditional lines of authority.

The Situational Distribution of Leadership Practice in AC and SFA Case Sites

By design, AC and SFA organizational and leadership forms are somewhat different. These design differences showed up in the implementation process across our cases. Though leaders across all case sites told us they sometimes modeled instruction and observed classrooms to provide feedback to teachers, AC leaders more often than SFA respondents, reported that they spent considerable time modeling instruction. SFA leaders more often than AC respondents reported that they observed classrooms and provided feedback to teachers. Most of the case study leaders across all cases, reported leading teachers work groups, though the content focus of such groups differed by model.

Collective Work. By the spring of 2002 respondents in all our AC cases reported using instructional work groups—an element of the AC design that encourages collaborative work by teachers, design coaches, and literacy coaches—focused primarily on instructional issues. We heard accounts of grade level or cross grade team meetings that encouraged teachers to work with coaches or the principal to closely examine academic standards, rubrics, and student work. Literacy coaches or design coaches generally led these meetings during which teachers shared problems or successful instructional strategies rooted in their daily practices—i.e. problems they encountered as they attempted to use AC instructional ideas, or methods for fostering high quality student work. Design Coach Ship at Forrest Hills Elementary offers a typical example as she reports on biweekly teacher meetings in that school:

The literacy coordinator and I usually sit with them [teachers]. We usually ask them to bring some student work with them to talk about it. Usually one teacher will bring a piece of student work and Xerox a copy for everybody. They all have their standards books so we look at the standard that they're working on and then we look at the student work and we read it and then they decide together or they decide individually what elements are there, what aren't there, and then we discuss it. . . . we talk about . . . what can I do with that student when I talk to them again. . . . we plan together: 'where we can take that student?' And it's

remarkable because others will say well I have one like that It's a lot of sharing, but learning, and people come with questions that they want answered. They come with concerns or—'I don't know how to get by this can you help me' kind of a meeting (S02)

Artifacts such as student work samples and rubrics, focused the attention and discussion of leaders and teachers, on problems of practice as such problems interacted with external standards—in part reconstituting the “situation” through which these enactors were working.

SFA school leaders also reported meeting at least once a month with teachers by component—e.g. all Roots teachers, or all Wings teachers. Reportedly, these component team meetings focused teachers' attention on multiple representations of student performances—artifacts associated with the SFA program such as the eight-week assessment summary and class progress reports. Leaders also reported using the meetings to review the pacing schedule, and content coverage; to review SFA instructional practices such as “think alouds” or; like the AC teacher meetings, to consider instructional problems. By our respondents' accounts, the meetings were sometimes motivational—i.e. leaders gave teachers encouragement and attempted to forge a “team spirit”. Some reported that facilitators would occasionally model instructional techniques during component team meetings. While some SFA teachers held positive views of these meetings—some teachers reported the meetings were very valuable learning opportunities e.g.-- others did not. Our SFA respondents also told us about one-on-one meetings during which a facilitator might provide a teacher with feedback from a recent classroom observation. While the meetings across AC and SFA helped teachers develop their capacity to use AC or SFA instructional practices, such work also served to build teachers commitment and allowed leaders to monitor progress.

Modeling Instruction and Observing Classrooms . AC leaders in our case sites, more often than SFA respondents reported spending time in classrooms modeling instruction. Literacy coaches also observed teachers, but by their accounts, these were instructional in nature—i.e. non-evaluative observations during which coaches would

first model, then observe teachers as they practiced new methods in order to offer helpful feedback. Literacy coaches also reported spending a good deal of time working with individual teachers to set up “model classrooms” where other teachers could spend time observing a colleague putting AC precepts into practice. Both of these modeling tasks tended to be “time intensive”—i.e. such tasks required sustained work in classrooms on the part of literacy coaches who sometimes reported working with individual teachers almost every day, for months at a time. The coaches in our cases generally tried to cover most teachers during the initial stages of a CSR grant, over an extended period of time; that is they would work with a few teachers, then move on to others. But in larger AC case sites, we heard repeatedly that the leadership was too thinly distributed across many classrooms to sustain the intensive relations that the work of “teaching and learning” required (See e.g. Nemser, 1983, Firestone and Corbett, 1988; Cohen and Ball, 1999; Barnes, 2002). Thus in these cases, literacy and design coaches tended to spread their time and expertise across teachers strategically, using a kind of “triage” (Lipsky, 1980) to identify the teachers who would benefit most.

While SFA facilitators said they would model lessons in teachers classroom if the teacher requested such a service, most also said, teachers did not often ask for this kind of help. SFA leaders, more often than AC or ASP respondents, reported observing classrooms and providing feedback to teachers. Reports of classroom observations in our SFA cases ranged from formal evaluations—mostly conducted by principals or vice principals--to informal “pop ins” for checking the pace at which teachers were covering material. In some schools teachers had to post a report on their door, identifying where they were in the 5 day SFA pacing schedule for the principal or SFA facilitator. SFA literacy facilitators often dropped by classrooms, not to evaluate by their accounts, but to check on teachers’ needs, questions, concerns, and so on.

Generally, much like the AC leaders, SFA facilitators, or school administrators were strategic with their time and expertise, focusing more often on inexperienced teachers, those who were having problems with SFA practices, or classrooms where students were taking external tests. But they also distributed their time across classrooms differently

than did the AC coaches: The latter group reported working intensively with particular teachers in their classrooms for hours and days at a time. The former—SFA leaders--tended to spend a few minutes in a classroom while covering many of them in a week—even in classrooms where teachers were not struggling. For example, we talked to educators in Gladrock Elementary where the staff was beginning their fifth year of implementation. The SFA facilitator told us she spends her time in classrooms or otherwise helping a teacher under certain conditions: “If a teacher is having problems. . . If I observed problems, or they felt like they weren’t strong in a particular area. . . “ Though this facilitator is strategic with her time, she also reports observing and providing feedback to *most* teachers in the school: “Do I observe them [teachers] and give them feedback?. . . Yes, on a continuous basis.” She told us she observed twenty-two teachers and was in classrooms everyday. How did she manage? Ms. Zafo, similar to other SFA respondents, described an activity she called “popping in” to classrooms for short periods of time. When asked how long her classroom observations lasted she explained: “It can be anywhere from two minutes, just popping in, seeing what’s going on. And it could be all the way up to five or ten minutes, depends”(F02, N504-519). She further explained that the longer pop-in “. . . gives me the opportunity to actually. . . collect scores, observe students; sit down and listen; talk to the students; [see] what they’re doing. . . .”

Distributed Authority Over Instruction: Traditional Norms Meet New Leadership Roles

Thus, capacity building, and monitoring--two key instructional leadership functions--“stretched” across multiple design elements and artifacts, over time, and over interactions with strategically selected teachers: they also stretched across different formal roles—e.g. administrators, or “teacher leaders” filling the CSR roles. While Spillane et al. largely discuss distributed cognition or intelligence, and Camburn et al. discuss distributed responsibility, our case data allow us to explore the notion of *distributed authority* in CSR schools. School practitioners in our case schools worked in teams to jointly enact the two leadership functions, parsing and using authority differently depending upon the formal role. In both our SFA and AC cases, this

leadership form appeared to weaken, but not eliminate, a long standing teacher norm against peer critique, and a boundary between traditional roles of “administrator or supervisor” versus “teacher or colleague”. Interestingly, school leaders had one account of their formal role, and another description of their daily practice. Thus, the collective leadership form and the manner in which school leaders used authority, maintained some stability of school norms, thereby allowing the program implementation to progress. In these cases, reform did not move too far out in front of traditional practices (Firestone & Corbett) but may have been nevertheless changing school norms toward a culture more conducive to improving instruction or to maintaining program practices (thus improving students’ opportunities to learn).

Developing Capacity and Supporting Instructional Improvement. Recall that Camburn et al. (in press) found that CSR coaches or facilitators tended to report more “development” work with teachers and less “monitoring” of instruction. Likewise, most leaders across our cases reported that CSR coaches or facilitators engaged in more instructional capacity building, than instructional monitoring. Though AC school leaders reported more modeling activity than did teachers; still AC teachers gave more frequent and detailed accounts of observing others model instruction—especially the literacy coordinators--than did the SFA teachers in our cases. Most AC teachers in our sample who reported working with literacy coordinators told us that observing these teacher leaders was very helpful in learning to use new AC instructional practices—especially in writing. Teachers across our AC cases generally perceived AC literacy coaches as supportive colleagues—“teachers”, more than administrators or “leaders”.

For example, at the end of Redmond Elementary’s third year of implementation, Ms. Lyon, a first grade teacher reported: “I had tons of support!. . . [AC literacy coach] helped me with lesson planning. She helped me actually in the classroom. She modeled things for me and then she would watch me and give me ideas. . . “ (S02, N32). Similarly, the teachers in our Westwood sample said that the two literacy coordinators had helped them learn AC writing practices (or to refine them, in the context of classroom practice). A

fourth grade teacher, Ms. Inge , like other AC teachers, reported on the value of seeing AC practices in action, in her own classroom:

Prior to American’s choice I . . . had to learn things on my own, by reading professional books, attending some workshops. But you really don’t learn a lot just by reading the books. You have to really see it in action. And when [AC literacy coordinator] came in here I could see her approach in action, and I could sit it working (S02)

By another teacher’s account, the literacy coordinator and design coach at Redmond served as motivators for keeping teachers committed to the improvement work during the implementation process. Ms. File told us that teachers were very involved in adopting AC, but once they began actually working with it they had “buyers’ remorse”. She reported for herself and others:

Oh wait, hold on! this is more than we thought we were getting into. But because we had Ms. Winn as our design coach and Ms. Hart as our literacy coach, **they both kicked our butts, literally! Ms. Hart is the biggest part of the reason that we are where we are...**(S02, N439)

In these comments we hear that the AC school leaders, in their new roles, functioned as a kind of pressure and support for at least some teachers as they were learning how to put new instructional strategies into practice in their classrooms.

While leaders in our SFA case site schools reported doing a lot of classroom observations in order to provide teachers with supportive feedback, teachers did not always confirm these reports: Some SFA teachers reported that observations and feedback were not at all helpful. Others said such activities did not occur very often. But SFA teachers disagreed—with others as well as with themselves--on these points: for example, some teachers gave positive accounts of mentoring and feedback from SFA facilitators; they sometimes saw these leaders as role models, or a source of

support and encouragement. Ms Lehr, at Gladstone Elementary reported that the SFA facilitator observed her and otherwise supported her—especially during the first year of implementation:

It seemed overwhelming when it was first introduced to us. And because of the training sessions that we received, and our facilitator who works with us very closely, and just working with each other . . . it's become a lot more comfortable. And I feel like I'm always improving (N379)

By all accounts, the SFA reading facilitator at Nightingale Elementary was very well respected and, like her AC counterparts, served as a key motivating force in the implementation process. For example, one teacher told us she continued to implement SFA : “Because we have such a hard working reading facilitator: you work hard because she works hard and you don't want to see her part of the program [do poorly]”.

It seems clear that at least some teachers across our SFA cases and most of our AC respondents, considered the CSR facilitators to be filling a “capacity building” role, one that supported teachers' improvement efforts and built commitment to model practices. Principals' reports were consistent with this view: They too, reported that the coach or facilitator did not evaluate teachers' work; rather the CSR leadership role was intended to instruct teachers and to otherwise develop their capacity to use model practices. Principals tended to report carrying out instructional leadership activities that were more formal and evaluative. Likewise, the coaches themselves reported more activities related to instructional capacity building. These reports are consistent with our quantitative findings, and with a long standing norm, often constructed through formal policies or union contracts—i.e. administrators evaluate and monitor teachers; teachers are peers, equal in status.

Leaders Enacting the Monitoring Function . Nevertheless, as we look more deeply into how these functions are distributed across the leadership teams in CSR schools, we see that coaches tend to say one thing—that is, they do not monitor—but report doing another: By their own descriptive accounts coaches and facilitators tend to

both monitor and develop capacity, though they do the former with ambivalence and caution. Likewise, respondents in formal administrative roles, are cautious about these new CSR roles that are most often filled by “teacher leaders”. Often, they too say one thing about CSR leaders’ role, but report using such leaders and their knowledge, in another way altogether. These somewhat contradictory reports are akin to the distinction Spillane et al.(2004) draw in a recent literature review, between espoused theories of action and “theories in use” (Weick, 1979; Argyris and Schon, 1974). All our respondents appeared ambivalent about the newly developed leadership roles, and cautious about how they were enacted in the inherited situation of union contracts or formal role definitions.

The principal of Doris elementary, Ms. Shur talked about how the monitoring and capacity building functions were formally distributed at Doris. She said:

Since she’s [SFA facilitator] not a supervisor, she’s put in a very precarious situation because she doesn’t want the teachers to see her as the supervisor who’s looking for the negative or looking to reprimand a teacher when he or she may not be doing the program exactly. Hers is to facilitate, to help the teacher improve her style of teaching and ability. . . (N:940;960)

The SFA Facilitator herself expressed the same kind of caution about the leadership functions she could or could not perform. When we asked her if she felt comfortable talking to teachers about improving their instruction. Ms. Zann said:

No. My personality is to be more of a people pleaser, to be perfectly honest with you. I have a hard time telling people that what they’re doing isn’t good. It’s an administrative thing and I don’t want to be an administrator.

But while the principal and vice principal at Doris, conducted “formal classroom observations” to evaluate teachers’ implementation of SFA, the SFA facilitators conducted many “informal” ones to provide teachers with feedback. Ms. Lane the

reading facilitator said she and Ms. Zann tried to do “walk throughs. . . two – three times a month” (S02, N:1528). By most accounts the administrators were considerably less knowledgeable than the facilitators about SFA instructional practices—especially the principal who was new to the school.

Thus, while the principal engaged in “formal evaluations” and carried out the monitoring function; she was not well equipped to do so. She didn’t understand the SFA program well enough to evaluate instruction based on SFA precepts. Thus she relied on the SFA facilitators who were officially “teacher-leaders” as opposed to “administrators”. Though these two facilitators told us they were uncomfortable evaluating their colleagues, and that they did not monitor teachers; essentially they did—at least they described doing so. Ms. Zann, Doris Elementary’s facilitator gave the following account of her goals for classroom observations:

My goals are to see that they’re [teachers are]following the program--number 1. So I look for some sort of scheduling. Then I’ll sit and observe the actual individual components. I’ll try to watch a listening or discussion or comprehension piece in everybody’s room. I’ll leave a little note telling them what I saw that was positive, or what they need to work on or please to come down and see me and we’ll talk. I have a checklist –the SFA checklist—that I use. I was quite often looking for think-pair-share, think alouds, cooperative learning, and that discussion techniques move along, and that the children were actively engaged and not writing everything (S02, N:432-443)

Here Ms. Zann is referring to the pacing schedule—a tool she used to monitor content coverage. She also refers to a rubric for judging how well a teacher is implementing SFA practices according to a common protocol. She casts this observation as “positive” and supportive, but also refers to the one-on-one conferences during which she points out problems to teachers.

Thus, though SFA facilitators in our case sites clearly carry out a capacity building function, and are perceived as supportive by some teachers, they also tend to monitor instruction. In effect “popping in” unexpectedly for a few minutes can provide these leaders with a sense of the classroom instruction. But most of our respondents viewed these classroom visits as neither “formal observations”, nor evaluations. When we asked if anyone other than the principal conducted observations at Gladrock, Mr. Jefe’s, the principal said:

In this building? No, I’m the only administrator that is certified to do formal observations and evaluations. However, like I said before, the SFA facilitators go in and administer informal observations for the teachers’ growth.

This response was typical across AC and SFA cases—i.e. the perceived division between “formal observations or evaluations” and informal, supportive classroom observations. At the same time, administrators used information gleaned from facilitators’ frequent classroom visits, as well as their substantive knowledge of the models’ practices.

Nightingale Elementary leaders represent an illustrative case of the cautious way in which authority was held and used across school leaders. Ms. Rudd, one of the SFA reading facilitators at Nightingale, talked about the ambiguous nature of her new role:

They (teachers) do come to me and say I don’t know how to do this; I’m having a problem with this; or what can I do with this kid? . . . I’m not sure that they view me as a teacher like them and I try to explain to them all the time that . . . I’m just a teacher. . . you know ‘we’re all in this thing together’. And I try to develop that kind of rapport.

She, like most other teacher leaders filling the CSR leadership role in our case schools, was attempting to build a trusting relationship with teachers, and to convince them that she was a colleague not an evaluator. But she appeared ambivalent about her role—i.e.

about whether she was a teacher or a supervisor of teachers. The other facilitator talked about her role in similar terms—i.e. she said that she supports teachers, but tries not to judge them. She told us:

If I was a new teacher and I wasn't sure about what I was teaching, the last person I'd really want to go to is my principal because I'd be afraid they'd say, "Oh, this person can't teach. I'm not going to hire them next year." At least they [teachers] know they can come and say, "Listen, this isn't working. What can I do?" And they don't feel threatened by it, and I think that's important. . . I'm in the room to see that the strategies are followed. . . then I hold conferences and say, "You know. . . I was in a room [yesterday] and the teacher did an awesome job with everything but I didn't see any discussion. It was too teacher-guided. Not enough teamwork and discussion.

Here she described a trusting relationship with colleagues, but at the same time, she was critiquing their work, comparing it to her knowledge of SFA practices or protocol. What is more, the school's principal used this facilitator's knowledge of both the SFA instructional ideas, and the way such ideas are put into practice by teachers, to evaluate classroom instruction. Like our other SFA principals, Mr. Espy admits to not knowing the SFA program as well as the facilitators. Nor does he spend as much time in classrooms as they do. Thus, he reported:

Sometimes what the facilitator may give me is what I call a little cheat sheet. Okay, you're going to go in at such-and-such a time. And these are the elements you're going to be looking for at that particular time with Ms. So-and-So. . .

These classroom visits are called "formal observations" after which the principal gives teachers written feedback expressing his view of strengths and weaknesses in their instruction. But once again, he called on the SFA facilitator to assist. He explains:

If I have a question about what it is that I may have seen and-or did not see, I may ask the facilitator to evaluate the quality of the lesson only, because I'm saying, "I was looking for this. Did you see such-and-such?" And of course it's over the telephone... Because . . . I do not want to violate or put my people in an awkward position.

It seems clear that the monitoring function—including evaluation—is stretched across a team of administrators and “teacher leaders” in this and other SFA case sites. We heard similar stories in our AC school cases. The respondents who make up these leadership teams in our case schools were ambivalent about the leadership functions they were carrying out. Mr. Espy expressed the dilemma in managing the evaluative and supportive functions for teachers implementing WSR. He explained:

This gets into an extremely delicate area, and it has to do with the role of the facilitator, the role of the administrator. The facilitators are in the teachers' bargaining unit. They have no evaluative powers whatsoever. . . they are not to report on their peers. . . However, they have to also communicate with me. . . . I think we've found a way for us to be able to communicate effectively together. And sometimes the way we communicate is by our visiting classrooms together.

What these respondents said about formal policies surrounding the distribution of authority appears quite different from what they told us they did in their daily practices. In their work, principals and facilitators alike, seemed to, cautiously move back and forth across a somewhat ambiguous line separating roles and formal leadership functions.

Our AC case leaders were similar in this regard. At Bonds Elementary the AC design coach and literacy coordinator were both hired as teachers. Our respondents reported that due to the teachers' union contract, these two “teacher leaders” were not allowed to formally observe and critique teachers' instruction; only certified principals could do that kind of monitoring work. Nevertheless, Principal Cole also explained that in this school, she conducted classroom observations with the AC coaches. These

observations were a big change for teachers; and even the principal was cautious about doing them. She said:

Now [after adopting WSR] the school leadership team consists of the principal, the assistant principal, the design coach and the literacy coordinator. . . . Now, it's . . . four pairs of eyes going in. And you're all looking for the same behavior and materials and programming. So that has been something that you would not have done before [the AC adoption]. I'm not even so sure that teachers would've been comfortable with their colleagues coming in and looking at them. . . . the comfort level has had to be massaged in order to get us there (S02).

The monitoring function as enacted collectively, by “teacher leaders” and administrators here, and in other AC case sites, was pressing up against norms of teacher autonomy and professional egalitarianism. These norms are deeply rooted in schools. Interference in the core work of teachers has long been considered a sign of disrespect (Little, 1990; Huberman, 1993; Lortie, 1975). Nevertheless, in this school formal rules, role definitions, and egalitarian norms appeared to have been circumvented, as clearly the literacy coordinator and coach were frequently in classrooms providing direct feedback to teachers about the quality of their instruction (Phelps, Case Write-up, 2002).

The leadership at Westwood Elementary nicely illustrates the way in which the monitoring and capacity building functions, as well as authority, were used and distributed across team members in an AC school. Ms. Sele, the literacy coordinator considered herself a teacher: She was adamant in her assertion that she was not an administrator and thus, could not formally observe or monitor teachers. But she did observe teachers and offer feedback to them in her capacity as a mentor: “I go into the classrooms and I model it [AC instructional method] and then I observe what I've taught them to do. That is pretty much what I observe. I don't observe them in any other way. I'm not an administrator. (S02, N359-361). She told us any feedback she offered to teachers was strictly instructional in nature; supportive, not evaluative. By most

accounts, including Ms. Sele's, the principal and vice principal served as the monitors or evaluators of teachers.

Nevertheless, as respondents described their work together, it seemed that the literacy coordinators were clearly monitoring instruction. Here is how the process worked. The two literacy coordinators developed a calendar of content and methods they expected teachers to be using each month (an AC related "artifact"). The calendar also included examples of student work they expected such instruction to produce. The "teacher leaders" also set agendas and developed the content of teacher meetings; they developed teacher assignments, and so on. Then they used the authority of the vice principal or principal to ensure that teachers followed the content schedule, or used what they were learning in the work groups: by putting the principals name on the monitoring calendar to make the work mandatory; by letting the principal know what to ask for and expect in classroom observations; by "directing" the vice-principal to take up particular content standards in grade level meetings; by enforcing the AC instructional calendar, and so on.

The principal, Ms. Pote, described how the pressure and support functions were linked in an observation-feedback loop that distributed tasks across school leaders :

What I would do is I would take children's notebooks and I would look at their sourcebooks. At one point I saw that it was being used incorrectly: not the way the literacy coordinator had [taught it]; not the way it was supposed to be. So I spoke to the teacher . . . Before I even got to the literacy coordinator, the teacher had already made it downstairs to the literacy coordinator to seek her out and to find out how this book was supposed to be used to support the program (S01).

A year after the CSRD funding had run out, Ms. Sele, the literacy coordinator, reported that she knew teachers were still using the AC practices to some extent, or at least trying, because they would still come to her to ask for help--when the principal let them know they were going to be observed, or when bulletin boards displaying student work were due to be changed. She explained:

We have a schedule for what the writing should be on the bulletin boards and as much as I thought the teachers would hate it, they don't know that Ms. Dice and I made it up the first year. They think the principal did. And she says in September you have to do this, in October that. I was like, 'don't put my name on it. Don't put my name on it. . . . ' They [classroom teachers] come and say 'well what do we have to do for May' (S02, N725-735).

Ms. Pote, the principal used the coordinators knowledge of AC instruction and Westwood's classrooms to focus her instructional monitoring; the two literacy coordinators used the principal's and vice principal's authority to enforce the program practices—behind the scenes. All members of the team used an AC related tool, a monitoring calendar—to link instructional capacity building with monitoring. Despite the cross case pattern of formal role definitions and rules surrounding them, this kind of teamwork in actually enacting the monitoring function was also typical in SFA and AC schools.

TEACHERS' ENGAGEMENT IN INSTRUCTIONAL IMPROVEMENT: MOTIVATION, CLARITY AND EFFORT

Previous implementation research has shown that both “support” and “pressure” are needed to ensure that enactors are “able” and “willing” to put external reforms into practice in the situated contexts of schools or classrooms (Firestone & Corbett, 1988; Elmore and McLaughlin, 1988; McLaughlin, 1990;1987;1976). Thus resources for collective work among teachers, and ongoing, concrete, knowledgeable support for learning new practices, can influence the quality of program implementation. Internal or external incentives also play a role in teachers' resolve to improve their instruction (Odden, 1996; Kelly, 1997; Fuhrman and O'Day, 1996; Cohen, Raudenbush and Ball, 2004). Spillane et al.(2004) have suggested that the role of school leadership is to provide these kinds of inducements and resources to motivate teachers toward improvement. They argue that leadership “involves mobilizing school personnel to notice, face, and take on the tasks of changing instruction, as well as harnessing and

mobilizing the resources needed to support the transformation of teaching and learning” (p. 17).

In the previous section, we considered in part, how the leadership functions of capacity building and monitoring, as enacted our case sites, had the potential to be motivating influences on teachers. By triangulating leaders’ descriptions of their work and teachers reports, we showed that through multiple interactions across different CSR elements, school leaders in our cases were providing pressure and support for teachers as they enacted CSR instructional designs. Some teachers told us they felt motivated to work hard, or stay committed to the reform practices because of various interactions with “teacher leaders” many of which they considered to be “collegial”. Some of our case study teachers reported learning from CSR coaches or facilitators, thereby enhancing the teachers’ capacity for implementing new classroom practices, or improving their instruction.

In this section we first take up teachers’ engagement in instructional improvement as an outcome of leadership or collegial interaction more broadly, using our survey data. Then we use our qualitative data to explore two of the teacher outcomes more deeply focusing especially on “motivation for improvement” in our SFA case sites. In doing so, we try to shed light on the nuanced nature of teachers’ motivation to improve, and how motivation relates to leadership activities, or CSR designs—i.e. two aspects of the “situation” through which teachers and leaders interact.

Quantitative Results

In this section, our primary interest is in investigating the relationship between instructional leadership and teachers’ engagement in instructional improvement, in contexts in which such leadership is distributed. As discussed above, recent research indicates that leadership functions in CSR schools are often distributed in such a way that leaders associated with CSRs engage in regular, and direct interactions with teachers that are intended to develop teachers’ “instructional capacity” (Camburn et al, in press). In other words, these interactions are intended to directly engage teachers in the work of instructional improvement. Thus, we hypothesize that teachers who interact more

frequently with CSR leaders are more likely to be engaged in improving their practice, by having greater motivation to improve, clearer understanding of expectations for improvement; and by putting forth greater effort for improving instruction.

As discussed above, in the CSR programs under study, interactions with instructional leaders often take place alongside or within the context of collaborative work among teachers. Thus, more frequent collaboration among faculty within the context of CSR may be indicative of joint work between CSR coaches or facilitators (who are typically teacher leaders) and other teachers who do not hold formal leadership positions. We hypothesize that teachers who interact more regularly with colleagues, particularly by engaging in peer observation, will be more engaged in improving their practice.

These investigations were conducted fitting a series of two-level Hierarchical Linear Models (HLM) that predict the three outcomes of teachers' engagement in instructional improvement discussed earlier—motivation for improvement, clarity of expectations, and teachers' efforts at improvement. In conducting these analyses we also examined intervention program differences in these three outcomes.

Descriptive Results

Teachers' Interaction with Leaders and Collegial Interaction. Figure 1 and 2 below shows the descriptive results of how teachers in CSR schools and control schools differ in their interaction with leaders and collegial interactions during the school year (see also tables in appendix). On average, America's Choice teachers report more opportunities to interact with leaders, and their colleagues than those in other program schools (see Table 5 in Appendix). The Collegial Interaction measure includes teachers reports on watching another teacher model instruction, watching a colleague teach to provide feedback, as well as being observed by another teacher and receiving feedback. The Interaction with Leaders measure includes the following: teachers' reports on watching a leader model instruction; being observed by a leader and receiving feedback about improving; and, receiving feedback from leaders about improving student work (see Appendix for more details on measures).

Figure 1. Teachers' Interaction with Leaders by Program

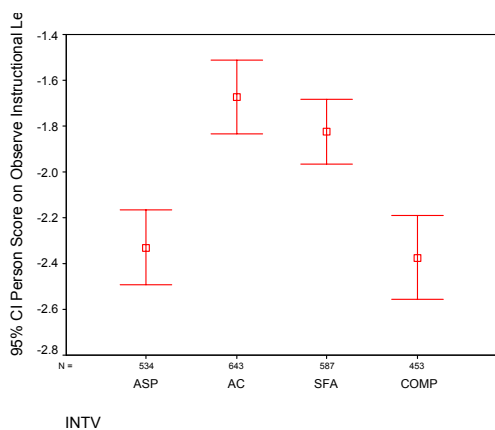
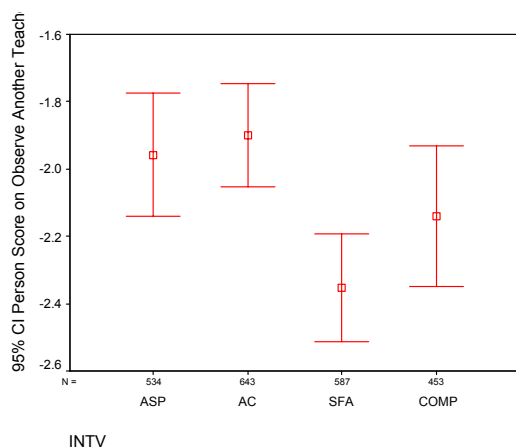


Figure 2. Teachers' Collegial Interaction by Program



Teachers' Engagement in Instructional Improvement Effort. The three figures below show how teachers in CSR program schools and comparison schools differ in their reports of clarity of expectations, motivations, and improvement efforts. On average, America's Choice teachers in the sample report a higher level of motivation, and improvement efforts than teachers in other intervention programs. The descriptive statistics also indicate there is greater variation among America's Choice teachers on these three outcomes than between SFA and ASP teachers (see also tables in Appendix). In contrast, SFA teachers report a greater clarity of expectations for instructional improvement. (see Table 6 in Appendix for the means and standard deviations).

While these descriptive results indicate interesting differences between teachers in different programs, they should be interpreted with caution because individual teacher and school level variables, which may be related to these outcomes, are not controlled.

Figure 3. Teachers' Perceptions on Clarity of Expectations by Program

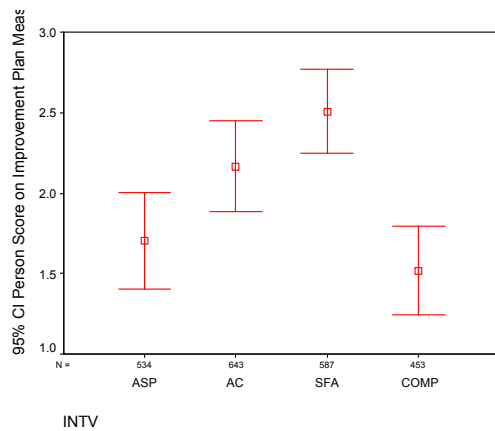


Figure 4. Teacher Motivation by Program

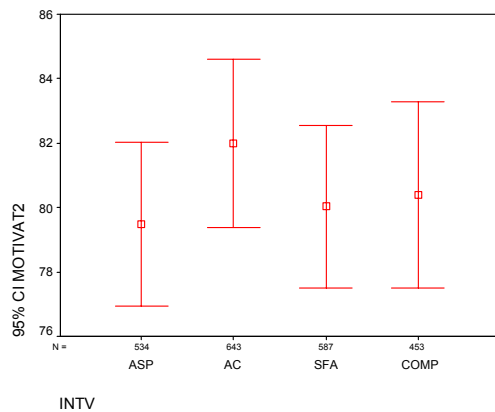
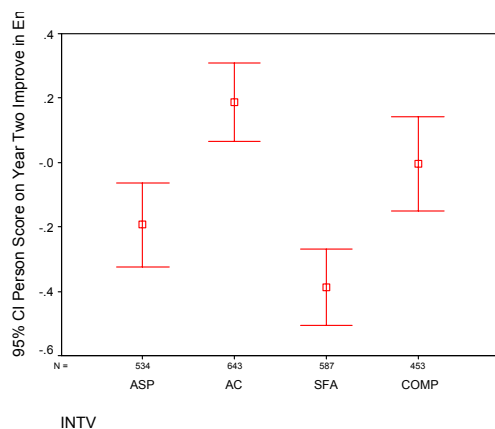


Figure 5. Teachers' Improvement Efforts by Program



HLM Results

Within and Between-School Variance. Fitting fully unconditional models (no predictor variables at either level), we found that a substantial majority of the variation in teachers' perceptions on the clarity of expectations, motivation, and efforts for improving literacy instruction outcomes lies between teachers within schools (ranging between 86 and 94 percent). In contrast, 13.5 % of the variance in clarity of expectations, 8.4 % of variance in teacher motivation, and approximately 6 % of variance in teachers' efforts at improving literacy instruction lie between schools.

Table 7. HLM Analysis of Teachers' Interactions with Leaders, Peers Observations, and Engagement

	Clarity of Expectations	Motivation	Improvement Effort
<i>Teacher Characteristics</i>			
Hispanic	.248**	-.008	.088
Black	.124*	-.083	.236***
Years of Experience	.011***	-.000	-.002
PK to 1 st Grade	.130**	.037	.156**
2 nd & 3 rd Grade	.032	.016	.174**
Subject Specialist	-.076	.143*	.064
Special Ed Teacher	.010	-.235***	-.030
Music/Art/Gym Teacher	.180	-.027	-.425**
<i>Teacher Report</i>			
<i>Distributed Leadership</i>			
Interaction with leaders	.177***	.006	.174***
Collegial Interaction	.129***	.051**	.136***
<i>Teacher Engagement Variables</i>			
Clarity of expectations		.612***	.090**
Motivation for Improvement			.129***
<i>School Characteristics</i>			
School Size	-.039	-.017	.013
School SES (CDI)	-.024	-.034	.010
<i>School Programs</i>			

ASP	.059	-.067	-.105
AC	.119	-.075	-.001
SFA	.241*	-.182*	-.302***

*p<.05 **p< .01 *** p<.001

Interaction with Leaders and Teachers' Engagement in Improvement. The results from our HLM analyses revealed two important associations between teachers' interaction with leaders and teachers' engagement in improving instructional practices. First, the results show that, controlling for other factors, there is a statistically significant relationship between teachers' reports of their interactions with school leaders and their perceptions of the clarity of expectations for improvement, with teachers who interact more frequently with leaders perceiving greater clarity in expectations. We found that teachers' interactions with leaders are also positively related to their improvement efforts. Teachers' interactions with leaders were not significantly related to their motivation for improvement suggesting that teachers who are more frequently monitored, observed, and exposed to leaders' modeling are not necessarily more motivated to improve their practices.

Collegial Interaction. Collegial interaction was found to be positively related to all three outcomes. The more opportunities teachers have to observe other teachers model instruction or to be observed by other teachers, the more likely they are to have clear expectations of the improvement efforts in the school. Teachers who more frequently observe colleagues model or teach, or who are observed by colleagues, are more likely to be motivated to improve. And finally, the results suggest that, controlling for other factors, collegial modeling and observations are significantly related to teachers' efforts at improving their instruction; that is, teachers report that they invest more time and effort in improving their literacy practices through professional development.

Clarity, Motivation, and Improvement Efforts. We also investigated relationships between the three outcome measures. Two interesting findings regarding the outcomes emerged. First, the more teachers have a clear sense of school improvement expectations, the more teachers are motivated to improve. Second, the more

teachers are motivated, the more they are likely to invest time and efforts for their literacy instructional practices.

Comparison of SFA and Other Programs. Finally, the results show that SFA teachers perceive a higher level of clarity in improvement expectations than teachers in the other programs, *but* they are less motivated and put less time and effort into improving their literacy instructional through professional development.

Qualitative Results: SFA Teachers and Motivation for Improvement

In this section we use our case study data to explore the interesting contrast regarding the effect of SFA on the three outcomes of teachers' engagement in instructional improvement. Generally, teachers' perception about the clarity of improvement expectations is significantly related to their motivation for improvement; and, compared to teachers in other models, SFA teachers are relatively high in their perceptions of the former—clarity of expectations. Still SFA teachers appear less motivated to improve and report putting less time and effort into improving their literacy instruction through professional development. To shed more light on teachers' motivation vis-à-vis the SFA improvement program, we probe the motivation outcome in more detail, using the views of teachers in our SFA case sites. We also consider teachers' motivation and the clarity of expectations outcome in relation to teachers' interactions with school leaders or "leadership functions" as distributed across design elements, teachers and leaders (in our SFA cases). Recall that our measure for teachers' motivation to improve includes the following items:

- I am capable of making the kinds of changes called for by the school improvement program (expectancy)
- The kinds of changes called for by the school improvement program are helping my student reach higher levels of achievement (efficacy)
- I strongly value the kinds of changes called for by the school improvement program (task-value)

The SFA teachers in our case studies were divided in their sense of these items: on one hand they frequently reported that the SFA program helped their students achieve or improve their performances—though not through interactions with leaders per se. Many teachers appeared to value this outcome, and attribute it to SFA, but not necessarily across literacy topics. Case study teachers valued the SFA reading component, more than the writing component. Further, SFA case teachers clearly *did not* value some of the changes that the SFA program required of them--staying on a fast paced schedule for content coverage for example. Some case study teachers reported being unsure whether they were capable of making the changes the SFA design calls for regarding the pace of instruction.

Many case study teachers reported that they saw an improvement in their students' reading test scores since using the SFA program. For example, Ms. Zest, a fourth grade teacher at Gladstone Elementary said:

They [Elementary School Performance Assessment] has the same skills that we have for SFA--like the comprehension, context clues, all of that. It's all connected. On ESPA they have to read; they have to get context clues; they have to figure out the meaning of a word. It's all connected. I think with that it [SFA] definitely helps, definitely helps. **And I've seen an improvement on our scores . . . and the way the children react to the tests as opposed to years ago [before SFA]. I think a lot of the children are a lot more comfortable (S02, N450).**

While this teacher does not directly link improved results to interactions with leaders, recall that component team meetings, most often led by the SFA facilitator reportedly focused teachers attention on multiple representations of student performances—artifacts such as the 8-weeks assessment and class progress reports. The capacity building, and even the monitoring functions were distributed across these artifacts and other elements of the SFA design. Like this teacher, other SFA case teachers also reported that the reading block was helping their students' performances, and was aligned with their state

assessments. Many of the SFA teachers and school leaders reported they would continue their current instructional practices in reading because of the improvement they observed in their students' reading performances—even though they did not value some aspects of the program. For example, when we asked Ms. Bean, a fourth grade teacher at Nightingale Elementary why she was motivated to continue using SFA practices in her instruction she said:

Because of the successes I see with the kids. I mean my 4th grade is **reading 86% on grade level.** And actually **the ones that weren't on grade level . . . have now moved up.** Although it's the end of the year, they are in a 4th grade book. So, I mean, hopefully most of them will come to summer school and maybe start 5th grade on grade level. (S02, N196-218)

Thus, the result of this teacher's SFA instruction served as an incentive to maintain model practices that by design are intended to improve students' opportunities to learn. Many, but not all teachers across our SFA cases gave accounts similar to this teacher. Ms. Pyne, a new teacher at Grapple Elementary told us:

And I see progress with my kids. . . I think the students who are here for a while really increase in their level of reading and comprehension and they just keep going up. So I think that says that something's working (S02 702-712)

Our respondents' comments just above, and below, provide another view into teachers' motivation to improve, or to maintain program practices. Here "belief" or motivation, may follow "action" (Weick, 1979; McLaughlin, 1990)—i.e. actually *using* the program and observing improvements in student performances, may have spurred teachers to maintain program practices, as opposed to motivation for improvement following directly from interactions with leaders. Nevertheless, school leaders have played a role in the process by which teachers arrived at this point as we saw in the earlier section on monitoring and capacity building.

Reading scores went up at Doris Elementary according to the SFA Facilitator, Ms. Zann. At the end of the third year of implementation, in the spring of 2002, she told us:

I will tell you we are on the SURR [School Under Registration and Review] list because of math. **Our reading scores went up our math did not. So 90 min of concentrated reading is good.**

Most teachers we interviewed at Doris Elementary concurred. Even with unstable, weak leadership from multiple principals and with resistance from teachers at the school; still at least some respondents reported student improvement due to the SFA reading program. The SFA facilitator at Grapple Elementary also reported success with using the SFA reading component: **When we started SFA 11% of our kids were reading at grade level. Now we're up to over 50%.** So obviously there was a need there that wasn't being met" (Ms. Tate, S02, N78-93).

Furthermore, though some SFA case teachers complained about the pace and lack of flexibility in the reading program, others felt the clearly specified nature of the model was helpful. For example, Ms. Pyne, told us: "Even though it's scripted, that's a good thing to have when you don't know what you're doing: It's really a good thing". This teacher's instruction was guided, or "led" through design related artifacts (SFA materials). Similarly, some respondents—teachers and facilitators--reported that SFA's structured reading design gave teachers a "technique" for teaching reading that was otherwise missing—for new and more experienced teachers alike. Ms. Fina said:

We never had anything about teaching kids how to read or how to do math [in college]. And even. . . the kids coming out of college now—because I had student teachers—didn't have those skills. . . . I feel that a lot of those [strategies] have helped us. I mean, **our test scores have gone up, our reading levels have gone up over the years--the number of kids reading at or on level.** . . . I think our school was lacking direction and structure. (S02, N325-359)

Here a common protocol for guiding instruction may have allowed teachers to improve their instruction: by *using* the protocol, and through doing so, seeing results, which in turn tended to be motivational influences on them. The arrows in this view of teachers' motivation as it relates to leadership are not necessarily direct, or one way.

Thus, reports of improved results in students' reading ability, clear and quite structured guidance from program materials, as well as a perceived alignment with external tests; all are reasons some SFA respondents—especially teachers-- reported maintaining the SFA reading practices, which in turn were apparently improving students opportunities for achieving. These reports might lead us to assume that many teachers *value* the SFA program changes they made, and thus would score higher on the motivation outcome. But case teachers' motivation was not simply higher or lower. The case data allows us to see the nuances not only in the way leadership functions were distributed across people, artifacts and interactions, but in their countervailing or subtly distinguishable influences on teachers' motivation to improve.

For example, the student performance results and clarity of guidance our respondents talked about were most often focused on reading, not other literacy topics, such as writing. While SFA respondents on the whole, were very positive in their reports of the reading component of SFA--that is, the Reading Roots program, or the Reading Wings program, both of which are specified within a 90 minute daily period devoted to reading instruction in all grades--only 2/16 SFA teachers had a strong, positive view of the SFA writing components. Some teachers appeared to lack a clear understanding of the writing components in terms of instructional goals. It appears case study teachers didn't value the "changes called for by the SFA program (task value)" across literacy topics.

Further, many case teachers chaffed at one aspect of both the SFA writing and reading components—that is, the lack of flexibility and their loss of discretion over instructional decisions. Complaints about a fast paced and inflexible schedule were related to teachers' reports about their interaction with leaders. For example, some SFA teachers

told us that leaders' observations were not especially helpful in implementing the SFA practices and others said such interactions with leaders did not occur very often. But some of these same teachers, and-or other SFA teachers, also gave generally positive accounts of mentoring and supportive feedback from SFA facilitators. Recall such accounts from our earlier section on facilitators as motivators, and supportive "capacity-building" colleagues. Ms. Webb, for example, reported on her interactions with the SFA facilitator at Nightingale Elementary:

We meet, our component meetings, and they're not just to sit and do busy work. It's a teachable, knowledgeable hour. She [SFA facilitator] is in the room. She's constantly in, so it's like she's invisible. She knows her material. She knows her job. And that's important. And she works hard. And to me, when the person ahead of you works hard, then you work hard for that person.

This teacher perceives the SFA facilitator, to be a motivating influence. She and several others that we interviewed at Nightingale said they respected this facilitator as a knowledgeable mentor or "teacher"—notice the comment about the component team meeting. Comments like these contradict the reports of other teachers—within or across SFA schools--who complain that observations and feedback from school leaders are not helpful. The comments from this teacher—the facilitator is in the room "constantly"—are also inconsistent with some SFA teachers' reports that their interactions with leaders did not occur much. Recall that SFA leaders were strategic in with their time, focusing on new teachers, or those who were struggling with SFA implementation. Perhaps the teacher commenting above, was one such teacher.

But another pattern of teachers' responses to leadership activities is pertinent here. As noted earlier, across all of our cases some teachers complained about the pace at which they had to implement the SFA reading or writing programs. The teachers' complaints about pace were very often accompanied by reports of SFA facilitators or others conducting classroom observations—this, even when many teachers said they were not observed much. It may be that that teachers did not consider such "drop ins" to be

observations, or again, such observations were more often focused on a few struggling or new teachers.

One matter seems clear in our cases: SFA teachers *did not value* the loss of flexibility and fast pace at which they had to teach. Nor did they value school leaders enforcing that pace through classroom observations. For example, a first grade teacher at Gladstone Elementary complained:

Because you have to stick with it. Day one, you'd better be on day one. At 10:12 you'd better be on your two-minute editing. You gotta be there doing it. And if your kid is stuck on a question, you can't stop because you gotta be, at 10:12. So when your facilitator comes around checking her watch, you better be where you're supposed to be (Vick, N257-278).

Similarly, a teacher at Doris elementary reported:

. . . the SFA facilitator or Assistant principal will come in, walk into your classroom and they'll see the time and they know where you need to be. If you're not at that area you're in trouble (Datz, N271-279).

When asked about the most challenging aspect of implementing SFA in her classroom another teacher at Doris said: "Time, time, time, time, time. Time and behavior" (Clay, N475-500). She elaborated that life in her classroom was not always amenable to the fast paced schedule given interruptions, sick children, and behavior problems.

At yet another SFA case site, Grapple Elementary in Markum, a teacher told us:

The time constraints that they [SFA leadership] have for each portion of the lesson, especially as you get up to some of the upper level lessons: it is not humanly possible. . . . it would not be impossible [for an adult reader] to do it the number of minutes that's allocated. But they don't acknowledge that to you at any point do they acknowledge that the time constraints are not possible.

This teacher doubted that she and her students were capable of working at the pace the leadership expected. Some of the other SFA case teachers had similar doubts.

Despite their doubts and complaints, most of the teachers in our case study sample appeared to find some value in the reading program. Not so the writing program. Many of complaints about the pace and the lack of teacher discretion were aimed at the SFA writing program. For example, Ms. Vick, said the pace was not fair to her students. When asked about the biggest challenge to implementing SFA she brought up the schedule imposed on her writing instruction:

The timing. It sucks. If you're trying to ask me to write a paragraph for you, I first of all need ... I need to brainstorm. I need to think. I may even need to illustrate. I need time to do that. And you can't. . . just can't slap ten minutes on me and say, "Here, I'm giving you ten minutes. Do it. Get it done, because we gotta be here at 10:12." It's not fair! (S20, N289-323)

Ms. Creo a teacher at Gladrock, said: "As I mentioned this morning, that's one of the problems I find with the program. . it doesn't leave the kids enough time to start and finish it" (F02).

Thus our SFA case study teachers gave inconsistent reports about their motivation for improvement (as we measured such motivation in our quantitative study): On one hand they valued the reading component, and improved student performances they were observing since implementing SFA practices in their *reading* instruction (though many told us the primary change they had made was teaching *more* reading comprehension and decoding). Likewise, some teachers valued the clarity of instructional guidance they received from the very specified program materials and instructional protocol. On the other hand many case study teachers did *not* value the writing component, or the pace at which school leaders and the SFA program, required them to work. Some teachers

reported that neither they, nor their students were capable of such fast paced work. We take up these patterns in more detail below in the discussion section.

One way to view this situation is to consider that the “pressure” and “support” leadership function are distributed across the SFA reading program artifacts—materials, protocol, and so on. Likewise interactions with school leaders and design artifacts such as student observation forms, 8 week assessments or class summaries, constitute the situation through which teachers work, and thus through which they had arrived at improved student results. Those in turn appeared to motivate some teachers to continue. The arrows in this view of teachers’ motivation as it relates to leadership are not necessarily direct or straightforward. Thus “socially” and “situationally” distributed leadership may have indirectly and differentially influenced case study teachers’ motivation to continue their improvement efforts—i.e. to continue to use the program practices.

DISCUSSION

The Distribution of Instructional Leadership in CSR Schools

Our case data and survey data show that two key instructional leadership functions—developing teacher capacity and monitoring instruction--“stretched” across multiple design elements and artifacts, over time, and over interactions with strategically selected teachers. While Camburn et al. showed that CSR models added leadership roles to schools, our interview data shows that CSR coaches and facilitators in our cases filled their new roles with caution and ambivalence. Our quantitative data also showed CSR coaches or facilitators (most often filled by teacher leaders in our cases) tended to report more “development” work with teachers and less “monitoring” of instruction. In our case schools these teacher-leaders appeared to work hard to cultivate trusting relationships with their colleagues. Both facilitators and literacy coaches repeatedly stressed their role was not to monitor or “evaluate”. And, they told us they did not judge their colleagues work; rather they supported, instructed, or otherwise helped

teachers. In fact, SFA cautions teachers filling these roles about this very matter--i.e. the facilitator is warned against becoming involved in teacher evaluation or monitoring.

Nevertheless, in most of our case sites, these same teacher leaders did advise principals and vice principals on where they should focus their observations, on what content, and when. But they did so covertly taking a decidedly “behind the scenes” approach. Furthermore, though case study teacher leaders repeatedly said they did not monitor or evaluate teachers, they spent much of their time in classrooms. The line between observing classrooms to “evaluate” and observing for other reasons is thin. Teacher-leaders tended to be very ambivalent about just what function they were enacting—as did administrators’ views on the role of these new leaders. In this sense, leaders’ formal account of their roles, differed from what they described doing in their daily practice. Leaders across our cases in both SFA and AC schools--used design related tasks to monitor, evaluate and control instruction, as well as to develop instructional capacity and support teachers’ change attempts. Both the supportive activities as well as the monitoring activities appeared to build commitment to model practices or to motivate teachers to use model practices—despite complaints or reservations. Administrators and teacher leaders collectively monitored instruction using distributed knowledge, expertise and authority in ways that were greater than the sum of what each individual brought to the task. In doing so, they appeared to “de-privatize” instruction to some extent. Thus distributed authority in our case sites appeared to be changing school culture or egalitarian, autonomous teacher norms, and at the same time, maintaining some traditional lines of authority—this last so as to not threaten existing relationships thereby producing social conflict, counterproductive to reform. Research and theory have argued that the move toward some intrusion into teachers private, discretionary instructional decisions—either through common content coverage and instructional protocol or common instructional practices and professional knowledge base developed through collegial interaction, or some combination of these—may lead to norms or a school culture more conducive to instructional improvement, and student learning (Purkey and Smith, 1983; Bird and Little, 1986; Little, 1990; Bryk and Driscoll, 1985; Bryk 1993; Newman and Wehlage, 1995)

Teachers' Interaction With Leaders, Clarity of Expectations, and Motivation To Improve

While SFA case study teachers tended to be less “actively” engaged in professional development activities than teachers in other models, many did *use* the specified program materials and instructional routines. In that sense they were “doing” the program, and were somehow motivated to implement it, even while they apparently did not value some aspects of SFA practices. These teachers shed light on the nuances that can exist in teachers’ motivation to improve, adopt or maintain new practices. Case study teachers’ doubts about whether they could stay on the fast paced schedule, and their complaints about pacing more generally, suggest why SFA teachers may have scored low on two items in our motivation measure: the expectancy item—I am capable of making the kind of changes called for by the improvement program; and the “task value” item—I strongly value the kinds of changes called for by the program.

But the case study teachers’ expressed dislike of the SFA pacing schedule as it related to school leaders monitoring that pace, contrasted with their view of improved student achievement—something many teachers and facilitators alike attributed to the SFA program. In this instance we followed up with an item analysis that suggests SFA teachers in our survey, did score higher on the efficacy item within the motivation measure, than on the other items. Finally, case study teachers held mixed views about “task value” of the SFA program by subject topic: the value they placed on the SFA reading component, was not consistent with their views of the writing component. In fact, in our case study schools teachers often reported that they did *not* use this component with fealty—i.e. they often supplemented, or supplanted the writing component with a range of other practices drawn from experience or from the district and state environment. This pattern suggests we might benefit from investigating the distribution of leadership in CSR schools across academic subjects, and how teachers’ motivation for improvement differs by subject matter and topic.

Interestingly, the clarity of expectations SFA case teachers reported, was also a source of their principal complaint about the program—i.e. the lack of discretion and flexibility in

their practice. Also interesting is the fact that despite teachers' complaints and doubts about the pacing, most appeared to be staying on the schedule. Reports from some teachers suggest that, had they had more flexibility or discretion, they would be teaching less—i.e. doing “more fun” activities as opposed to teaching fast paced comprehension instruction. In fact, a few teachers in one of our low implementing schools told us they dropped the SFA program around holidays and just did “fun stuff.” The former phenomenon—teachers “doing” the program and staying on a rapid pace despite complaints and doubts—raises an interesting question about the nature of motivating influences on teachers work.

Our quantitative results showed that SFA teachers reported relatively high levels of clarity in terms of improvement expectations, even though on average, these teachers reported fewer opportunities to interact with colleagues in classrooms (than AC teachers, ASP teachers and comparison school teachers). SFA teachers on average also reported fewer opportunities to interact with leaders (than AC teachers). This finding is somewhat puzzling given the HLM result showing that teachers who interact more frequently with leaders or colleagues are more likely to hold clear expectations, than those who do not. But these findings do seem consistent with the SFA design, and with our case reports. By design, SFA teachers are generally guided by a common specified instructional repertoire, and curriculum. The case teachers appeared able and willing to articulate program expectations—in part due to the clear, specified materials or instructional routines they used. Most teachers in our SFA cases used a common language, and had some understanding or knowledge of what other teachers in the school were doing because they assumed that most teachers in their respective schools were implementing SFA. A few teachers valued this sense of a clear, common expectations for practice.

Teachers in our case study teachers articulated a clear sense of what they and others teachers were doing without necessarily developing that knowledge from interactions with facilitators or colleagues—though some mentioned component team meetings as helpful in this regard. Rather, these teachers appeared to be interacting with program materials: some of these teachers reported “learning by doing” the program, more than

engaging in ongoing professional development through sustained work with school leaders. Though some teachers did report professional development through SFA “training” and through work with leaders, many disliked having leaders in their classrooms. Here the distributed leadership frame which takes in the situationally as well as socially distributed aspects of leadership can help account for the central role that “artifacts” and their “use” in SFA classrooms, play in these teachers’ “improvement”.

Unlike SFA, the AC model tends to develop teachers understanding of new instructional practices through interactions with colleagues or officially designated, “teacher leaders.” Thus, it is not surprising that our quantitative results showed that on average, America’s Choice teachers report more opportunities to interact with leaders, as well as to observe and be observed by other teachers than those in other program schools. Recall also that our qualitative case data showed that AC leaders report spending considerable time modeling in classrooms, or setting up model classrooms to provide opportunities for teachers to observe their colleagues. Both findings appear consistent with the model’s design, which at the time of our study, was not as specified as SFA’s: materials and the expectations for improvement were less structured—especially in reading comprehension. (The expectations in the ASP model, were even less specified than AC, as teachers were required to develop a unified improvement plan through their own inquiry and problem solving process.) Thus, it seems reasonable that AC (and ASP teachers) would develop more clarity in improvement expectations as they interacted with school leaders, over time. For example, recall that AC case teachers spent long periods of time focused on clarifying instructional goals based on student work samples. These meetings and modeling by leaders provided AC teachers with the concrete strategies for changing their practices, while SFA materials and routines tended to do that for SFA teachers. Thus, our HLM result showing a statistically significant relationship between teachers’ reports on their interactions with school leaders and their perceptions of the clarity of expectations for improvement appears consistent with the ASP and AC designs and case study data.

But we also found that generally, teachers' interactions with leaders are not related to their motivation for improvement. Teachers who are more frequently monitored, observed, and exposed to leaders' modeling are not necessarily more motivated to improve their practices—that is, they do not feel more capable of changing their practice; they do not necessarily value the required change; and they do not observe or attribute improvement in their students to the program change. SFA and AC case teachers reports are puzzling in this regard. First, while some SFA teachers appeared to value their interactions with facilitators and see those CSR leaders as prime motivators as well as supportive mentors; others did not. Second, nearly all the AC teachers who had worked with literacy coaches reported that the coaches' instructional modeling had been helpful in building their instructional capacity—i.e. in learning to do the AC practices.

One way to shed light on this set of findings related to the relationship between teachers' interactions with leaders, and their motivation to improve, is to examine the disjuncture between SFA teachers' comments about their interaction with leaders. Recall that our SFA case study respondents generally reported more classroom observations and "feedback" than AC respondents, who more often reported modeling instruction. SFA case teachers disliked leaders observing them to keep them on pace: teachers complained about this kind of interaction with school leaders. Here, it is not surprising that such interactions would not lead to increased motivation on the part of these teachers. Our interaction with leaders scale tended to measure teachers' perceptions of leaders' classroom observations and feed back, as well as modeling, and leaders' advice about improving student performances. It may be that these SFA teachers' value some kinds of interactions with facilitators even though they dislike classroom observations—for example, facilitators worked with teachers in one-on-one conferences, provided informal advice, or led group work in component teams. This possibility merits further study. Likewise, it appears from our SFA cases, that leaders may sometimes serve as motivators by acting as strong, "hard-working" role models, or by providing encouragement in processes less specified than classroom observation. It also appears that monitoring instruction, though not valued by teachers, may contribute to their maintaining innovative

or new instructional practices. These case study findings suggest further avenues for studying motivation in our SFA survey sites.

Another way to account for the quantitative results showing that teachers' interactions with leaders are not related to their motivation for improvement is to recall the way in which our case study leaders in both AC and SFA programs distributed their time and expertise--across teachers, and over time. Given that the quantitative analysis is cross-sectional, we could not observe from that analysis how relationships between teachers and school leaders developed over time, or how such relationships unfold in practice. But leaders across both AC and SFA cases reported that after the first two years of the program, they were strategic in their interactions with teachers, devoting most of their time to new or inexperienced teachers, or those who were having trouble implementing the program. Thus, our cross-sectional analysis may be measuring the views of teachers who for the most part were new, inexperienced or struggling with implementation. Those are the teachers our cases suggest were interacting most often with leaders by the second or third year of implementation. And, it seems reasonable that those teachers would feel less capable of making the required changes; less able to see improved performances in their students, and less able to see the value in the program changes they were struggling to make.

Finally, leadership distribution may account for some of the within school variation in teacher outcomes (along with error at the teacher level). Recall, that while we found a statistically significant variation between school means in the clarity and motivation outcomes, a larger portion of the variations lie within schools. This finding suggests we should investigate teacher level factors that may influence teachers' engagement in improvement within a school. But the case data also suggests that school leaders are strategic in distributing their time over teachers—sometime performing a kind of triage. Further, the case reports documented in this paper suggest that SFA leaders may spend less time, in more classrooms than AC leaders, while AC case leaders may spend a good deal of time working intensively, with a few teachers. Over time, school leaders in both models tried to interact with all teachers—AC case study leaders worked with a few

teachers intensively then moved to others; SFA leaders dropped in on most teachers for very short periods of time. But again, our cross sectional quantitative analysis, may be measuring infrequent interactions for sustained periods of time (and the perceived outcomes from those interactions from only a few teachers) or, frequent interactions and perceived outcomes from most teachers within a school, but for very short durations. Our case study data suggests within school variation in the predictor—interactions between leaders and teachers—may be contributing to within school variation on the teacher outcomes.

Collegial Interaction

We also found that teachers who more often observe other teachers model or teach and who are more frequently observed by other teachers are more likely to be motivated to improve; to invest more time and efforts in improving their literacy practices; and to report clear expectations of the improvement efforts in the school. Our qualitative data suggests that teachers may perceive coaches and facilitators as supportive colleagues—teachers—more than “leaders” per se. Thus the collegial interaction measure may be capturing some of the work that AC or SFA leaders do in classrooms or workgroups. This seems especially so for AC literacy coaches and the intensive modeling and “teaching” of teachers they do, working for sustained periods of time in classrooms. Likewise, the group work that teachers in the AC model do is very focused on student work with both colleagues (may include “teacher leaders”) as well as more formal leaders commenting on ways to improve.

APPENDIX

Table 1. AC & SFA Case Study School Characteristics

	District Pseudonym	School Pseudonym	% Free Lunch	School Size	% Minority
AC	Adderly	Westwood	85	650	93
	Coverdale	Redmond	94	285	90
	Sunnyside	Bonds	98	600	100
	Markham	Forest Hill	90	570	89
SFA	Adderly	Doris	100	550	100
	Freightville	Nightingale	85	327	99
	Sunnyside	Gladstone	85	565	100
	Markham	Grapple	78	374	80

Table 2. Quantitative Analyses Sample Characteristics

		Total	ASP	AC	SFA	Comp
School (n=114)	School Size	474.57	471.50	541.61	394.15	478.28
	Minority Percentage	71.76	63.00	80.47	75.23	66.63
	Free/Reduced Lunch %	77.39	68.77	82.50	81.58	75.79
Teacher (n=2217)	Hispanic	.09	.06	.07	.11	.15
	African American	.22	.16	.35	.21	0.13
	Years of Experience	13.28	13.27	12.97	12.59	14.74
	Grades PK to 1	.32	.34	.33	.32	.32
	Grades 2-3	.30	.29	.28	.32	.34
	Grades 4 & above	.27	.26	.28	.29	.26

Table 3. Items in Teachers' Engagement Measures

Clarity of Expectations for Improvement
There is a detailed plan for improving instruction in our school The steps for improving instruction are carefully staged and sequenced The steps for promoting classroom improvement are clearly outlined Instructional goals for students are clearly defined I have been exposed to examples of expected student work I have been exposed to examples of expected instruction The program has provided me with many useful ideas for changing my practice
Motivation for Improvement
I am capable of making the kinds of changes called for by the school improvement program (expectancy) The kinds of changes called for by the school improvement program are helping my students reach higher levels of achievement (efficacy) I strongly value the kinds of changes called for by the school improvement program (task-value)
Effort at Improving Literacy Instruction
<i>In your professional development, how much <u>time and effort</u> did you devoted to...</i> Improving my knowledge of the writing process Improving my skills at designing reading/language arts tasks for students Analyzing or studying reading/language arts curriculum materials Extending my knowledge about different comprehension strategies Extending my knowledge about different ways to help students blend and segment sounds Improving my knowledge of phonetics Improving my skills at doing miscue analysis

Table 4. Teachers' Opportunities to Improve Instructional Practices via School

Leadership

Interaction with Leaders
<i>How often did the following happen?</i> I watched an instructional leader (e.g. coach, coordinator, or facilitator) model instruction An instructional leader observed me teach and gave me feedback about improving my teaching techniques An instructional leader observed me teach and gave me feedback about my use of curriculum materials An instructional leader studied my students' work and commented on ways I could improve their learning
Collegial Interaction
<i>How often did the following things occur?</i> I watched another teacher model instruction Another teacher observed me teach and gave me feedback I watched another teacher teach and gave him or her feedback

In addition to the key predictors, we created other teacher and school level variables. We coded the grade variable as three groups: PK to 1st grade, 2nd & 3rd grade, and 4th & above. The reference group is 4th & above grade in the analyses. We also created indicators for teachers' subject specialty (e.g., special education teacher, subject specialist) and other teacher background variables such as teachers' year of experience

and ethnicity (dummy coded for Hispanic, African American, and White). For CSR indicators, we dummy coded school programs. In the analyses, the reference group is comparison schools that are not involved in Accelerated School Project, America's Choice, and Success for All. To indicate school SES, we created the indicator from CDI data. School size variable is also used in the analyses. Except the dummy coded indicators, these predictors and outcomes were z-scored for our HLM analysis.

Analytic Model: 2-level Hierarchical Linear Modeling

One-way ANOVA HLM model. We first investigate the variability within and between schools in teachers' reports of their engagement in instructional improvement. We run two-level one-way ANOVA models in the HLM (i.e., the fully unconditioned model) and test the hypothesis whether the estimated value of τ_{00} is greater than zero, in other words whether all schools have the same mean scores on their teachers' perceptions of clarity of expectations, motivations, and instructional improvement efforts scores ($H_0: \tau_{00} = 0$). The rejection of the null hypothesis ($H_0: \tau_{00} = 0$) means that a significant between-school variation exists in the outcomes.

The Level 1 model is specified as:

$$Y_{ij} = \beta_{0j} + r_{ij}$$

Y is the content focus score for teacher i in school j , where β_{0j} is the mean of teachers' engagement scores in school j , and r_{ij} is level-1 error with a mean of 0 and a variance of σ^2 .

The Level 2 model is specified as:

$$\beta_{0j} = \gamma_{00} + u_{0j},$$

Where γ_{00} is the grand mean outcome in the population, and u_{0j} is random effect associated with unit j and is assumed to have a mean of zero and variance τ_{00} .

Fixed level-1 coefficient HLM model. After we assessed the variation within and between schools, we built the fixed level-1 coefficient HLM models to investigate

the relationship between the key predictors and teachers' engagement in instructional improvement. Since we have three outcomes that represent teachers' engagement at instructional improvement – clarity of expectations, motivations, and instructional improvement efforts for literacy instruction – we ran HLM models for each outcome.

This fixed level-1 coefficient model indicates that the mean of teachers' outcome scores in a school (intercept, β_{0j}) randomly vary across schools. However, the slopes in the model do not vary across schools. That is, the relationships between the level-1 predictors and the outcome variable are assumed to be the same across schools, regardless of the school membership of the teachers.

The Level-1 Model is specified as:

$$Y_{ij} = \beta_{0j} + \beta_{pj} X_p + r_{ij} \text{ for } p > 0$$

Y is the outcome score for teacher i in school j , where β_{0j} is the mean of teachers' perception on clarity, motivation, and instructional improvement efforts in school j , and r_{ij} is level-1 error with a mean of 0 and a variance of σ^2 . β_{pj} represents HLM coefficients for teacher level key predictors.

In addition to our key predictors (teachers' interaction with leaders and peer observations) we also include other teacher level variables such as ethnicity, grade level, and subject area specialty (e.g., special education teacher, subject specialist) as control variables. School level predictors included in the initial models are the indicators for intervention programs and other school level variables such as school size and school SES. We control these teacher and school level variables because they may also affect teachers' engagement in improvement efforts. For the missing data of these teacher variables, we created indicators for missing data and included them in the HLM models. It should be also noted that all teacher and school level predictors were centered around their grand means in the analyses. Thus, the mean outcome of teacher engagement for each school was adjusted for the teacher-level and school level predictors.

The Level-2 Model is specified as:

$$\beta_{0j} = \gamma_{00} + \gamma_{0q}W_{qj} + u_{0j} \text{ for } q > 0$$

$$\beta_{pj} = \gamma_{p0} \text{ for } p > 0$$

Table 5. Descriptive Statistics for Teachers' Opportunities to Improve Instructional Practices (n=2217 teachers)

Variables	Total	ASP (n=534)	AC (n=643)	SFA (n=587)	Comp (n=453)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Interaction with Leaders	-2.08 (2.09)	-2.33 (1.91)	-1.67 (2.09)	-1.82 (1.74)	-2.37 (1.99)
Collegial Interaction	-2.01 (1.96)	-1.96 (2.16)	-1.90 (1.97)	-2.35 (1.98)	-2.08 (2.08)

Table 6. Descriptive Statistics for Teachers' Engagement in Instructional Improvement (n=2217 teachers)

Variables	Total	ASP (n=534)	AC (n=643)	SFA (n=587)	Comp (n=453)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Clarity of Expectation	2.01 (3.39)	1.70 (3.51)	2.16 (3.66)	2.51 (3.21)	1.52 (2.96)
Motivation	80.54 (31.61)	79.48 (30.00)	81.99 (33.58)	80.03 (31.05)	80.41 (31.32)
Improvement Effort	-.10 (1.56)	-.19 (1.54)	.19 (1.58)	-.39 (1.47)	-.01 (1.59)

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