

**Design As Intended, Design As Enacted:
External Assistance Providers and High School Reform**

Catherine Dunn Shiffman,¹ University of Pennsylvania; Diane Massell, University of Michigan; Matthew Goldwasser, University of Pennsylvania; and Joy Anderson, University of Pennsylvania

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¹ All comments and questions regarding this paper can be directed to Cathy Shiffman at dshiffma@gse.upenn.edu.

Changing Times: How High Schools and External Improvement Organizations Work Together

PROJECT OVERVIEW

Each year more high schools are identified as underperforming due to failure to make adequate yearly progress. To raise achievement, new performance expectations require teachers, schools, and districts to move beyond aligning curriculum, reallocating time, and other conventional approaches. In response, they are relying more and more on external school improvement organizations. Although U.S. schools since the early 1990s have increasingly turned to external sources of assistance for improving academic achievement, literacy, graduation rates, and other key problems, the challenge of making changes in schools, and high school in particular, is well documented (Siskin, 2003).

To better understand this challenge, CPRE researchers have prepared four papers that examine the efforts of five external reform organizations and their interactions with high schools. We focus on provider design strategies and challenges, the uses and perceived effects of the reforms in high schools, the mutual impacts of communication networks and reforms in schools, and the nature and school leadership in the implementation of reform efforts. This project is particularly important and innovative because it makes the reforms and their impacts on schools simultaneous objects of investigation. Findings will allow schools and providers alike to select and strategize more carefully in order to maximize the potential for deep use of improvement strategies.

The research presented in the four papers draws from interview, survey, and observation data collected during 2004 and 2005 at 15 high schools across the country and from staff at five external assistance providers. The external reform organizations—High Schools That Work, First Things First, Ramp-Up to Adolescent Literacy, the Penn Literacy Network, and SchoolNet—were selected as representative of the types of external assistance found in high schools during previous CPRE research (see Gross & Goertz, 2005). The providers include two whole school reform models, two literacy programs, and one strategy to increase data-driven instruction. The 15 schools in our sample were selected based on recommendations from the reform organizations. Each provider identified three schools with which they had collaborated for one to five years. Ten of the study schools (two from each of the five providers) were in their first or second year of implementation. Five “mature” sites had worked with their respective provider for more than three years. In this way, we were able to examine several phases of a given reform.

Schools at the earlier stages of implementation were visited twice (at the beginning and end of the 2004–2005 school year) while the mature sites were visited once. During each visit, interviews were conducted with teaching and administrative staff at the school and district level. Staff members with both central and peripheral involvement with the reform were targeted. In total, our findings are based on approximately 380 semi-structured interviews lasting about 30–60 minutes each. During our site visits, we also conducted guided observations in a sample of classrooms. Interviews were also conducted with staff members at each of the reform organizations. These interviews focused on general questions related to the reform as well as

specific issues related to the schools in our sample. Interviews with fourteen provider staff members were conducted and analyzed for this project.

In addition, a survey was conducted with all teaching staff at each of the 15 sites. Using social network analysis, the survey provided information on the communication networks that exist within schools. The survey also contained items that allowed us to measure the depth and breadth of the implementation of a particular reform in each of the 15 schools. Our survey findings are based on 1,057 returned surveys, with individual school response rates ranging from 60 to 90 percent.

The interim findings of this project have been compiled into four papers (a fifth paper on the role of the central office will be forthcoming) that each shed important light on the design, use, and mutual impacts of external reform efforts and American high schools. Taken together, the papers provide a multi-faceted approach to describing the complexities of making change in high schools.

Citations

Gross, B., & Goertz, M. E. (Eds.). (2005). *Holding high hopes: How high schools respond to state accountability policies* (CPRE Research Report No. RR-056). Philadelphia, PA: University of Pennsylvania, Consortium for Policy Research in Education.

Siskin, L. (1994). *Realms of knowledge: Academic departments in secondary schools*. London: Falmer.

The four papers currently based on the data from this project include:

Goertz, M. E., Goldwasser, M., Hovde, K., Mueller, J., & Riggan, M. (2006). *Getting past go: The use and perceived effects of external provider packages in high schools*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Riggan, M., & Supovitz, J. A., & Hovde, K. (2006). *They come in all shapes and sizes: Leaders and high school reform efforts*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Shiffman, C. D., Massell, D., Goldwasser, M., & Anderson, J. (2006). *Design as intended, design as enacted: External assistance providers and high school reform*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Weinbaum, E. H., Supovitz, J. A., Gross, B., Cole, R. P., Weiss, M. J., & Ricalde, B. (2006). *Going with the flow: Communication and reform in high schools*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Introduction

High schools are under increasing pressure to change the ways in which students are educated. Fueled by the federal No Child Left Behind legislation, state accountability measures require schools to demonstrate that their students meet performance expectations or risk sanctions. Increasingly, schools and districts seek the assistance of external providers in such endeavors. In 1996, purchases of school improvement services hovered around \$50 million (Milot, 2004). By 2001 that figure had climbed to almost \$1.4 billion. The federal government, private donors, and foundations have lent considerable support to develop and spread the reform work of external providers in schools (Bodilly, Glennan, Kerr, & Galegher, 2004). This Consortium for Policy Research in Education (CPRE) study examines scale-up of external instructional improvement designs in high schools. In this interim paper, we explore the theories, strategies, and organizational characteristics of five external providers, as well as their own perspective on the implementation and scale-up of their work in fifteen schools across the country.

The study includes five very different types of providers: two whole school designs (High Schools That Work and First Things First), two targeted literacy programs (Ramp-Up to Literacy and the Penn Literacy Network), and one technology initiative to spur data use (SchoolNet). The jury is still out on whether more targeted and constrained approaches, or comprehensive school reforms, are more effective in terms of the quality of implementation and the ability to raise student achievement (Berends, Bodilly, & Kirby, 2002). Providers themselves wrestle with questions about how to best leverage change for school improvement and student learning. What is the appropriate level of specificity in their instructional work? Should providers intervene in the climate and structure of the school as an organization? If so, what are the most effective and efficient strategies to use? How specific and involved should providers be in directing schools to build support for the design's intended changes? What is economically feasible for providers to offer to schools and districts, and still achieve positive outcomes? The approaches taken by the providers in this study reflect their answers to these and other questions, and lessons they take from their work with schools in an evolving marketplace.

In this interim paper, we explore how external provider organizations and their staff who work closely with schools and/or districts think about the implementation and scale-up of their “products” in school contexts. To begin, we describe our methodology and then review the research literature that frames our discussion of the five reform models. Then, we provide case studies of each design. In this section, we briefly outline each design's goals for reform, theory of action—or how the reform should work—and theory of student learning with the assumption that the design matters in implementation and scale-up. Next, we analyze the designs as enacted in the study schools from the perspective of the providers. To do this, we use a modified version of a conceptual framework developed by Cynthia Coburn (2003). Specifically, we consider how the designs and accompanying provider support work to establish deep change in school norms and teacher beliefs and practices, spread the reform through the school, and sustain the effort over time. We examine the providers' views regarding how their design impacts teaching and learning, and challenges and successes they identify in their work with schools. In our analysis, we found that the providers possessed a range of direct knowledge about how their reform was unfolding in classrooms. Explanations for a design's progress in the school or district tended to

fall into four categories: the complexity of a particular design idea or practice, its appeal to teachers, the resources demanded, and the school or district leadership available to create a supportive environment. We also observed that once the provider-school/district partnerships were underway, the provider were willing to negotiate many design requirements. These emerging findings hold implications for external reform organizations, schools, and districts considering and currently engaged in these types of partnerships.

Methodology

The findings presented in this paper focus on the reform's progress in the study schools from *the perspective of the provider organization*. As such our analysis draws exclusively from data collected from and about the providers and their designs. Data sources for this paper include interviews with provider staff members, and materials from the provider and secondary sources. Over the course of 14 months, 20 structured interviews were conducted over the telephone (16) or in person (4) with a total of 14 provider staff members who we refer to as *provider liaisons*. (See Table 1.) These individuals were employed by the provider organization and supplied guidance, technical assistance, and general implementation support to teachers, schools, and districts engaged in the reform. The first interviews were conducted prior to CPRE's school-based fieldwork and explored the reform broadly. The second round of interviews was conducted after CPRE researchers had visited the study schools at least once. These conversations with provider liaisons further explored the reform's goals; theories of action, learning, and schooling; and progress in the study schools. The materials collected about the five providers and their reform models varied in quantity and scope. Documents included promotional literature in all cases, and implementation manuals, scheduling guidelines, monitoring tools, and formal evaluations of the reform in some cases.

Table 1. Number of Provider Liaisons Interviewed

Provider Organization	Round 1 Interview	Round 2 Interview	Total Interviews
Ramp-Up to Literacy	2	3	5
Penn Literacy Network	2	2	4
First Things First	1	2	3
High Schools That Work	2	3	5
SchoolNet	0	3	3

It should be noted that across and within each reform model there was variance when it came to the level of direct contact provider liaisons had with the schools in the study, an observation we will explore in greater detail later. SchoolNet liaisons spent virtually no time in the schools, but rather worked with district staff. Ramp-Up teachers were trained off-site and provider liaisons spent significant time in Ramp-Up schools only if the school was also using the organization's comprehensive school reform model, America's Choice. This was the case in two of the three Ramp-Up sites. The Penn Literacy Network liaisons had direct contact with teachers at all three schools and extensive background knowledge of one of the schools, but limited contact with high school classrooms. The High Schools That Work and First Things First provider liaisons worked more frequently in the schools we visited. The majority of liaisons

interviewed were responsible for more than one school. Liaisons also drew on their experiences more broadly to respond to interview questions regarding a particular school. Finally, interviews with liaisons from the same organization highlighted the interpretative nature of their work. In essence, provider liaisons within one provider organization sometimes had different impressions of the strengths and challenges the reform faced in high schools.

Scaling-Up External School Reform Designs

The implementation and scale-up research on external designs highlights key decisions providers make about the design and roll-out, potential trade-offs of those choices, and compensating strategies. One set of decisions providers make concerns the degree of design specificity that accompanies the reform. Providers who offer highly-detailed expectations and instructions with their designs argue that implementation is more likely to be faithful to the principles of reform, and that teachers both want and need this kind of concrete guidance (Ball & Cohen, 2003; Berends, et. al., 2002; Colby, Smith, & Shelton, 2005; Hatch, 2002). But there are also trade-offs. A more detailed design with extensive support for implementation is more costly in terms of an external provider's financial and human resources. Furthermore, an external design's flexibility to align to policies and school infrastructure is often a priority for schools and districts. Specified designs may require more alignment effort on behalf of the school and/or the provider—an important consideration in the current accountability environment. A related concern for providers is how to secure educator commitment to reform. Some propose that the only way to garner such buy-in is to steep educators deeply in the philosophy and core principles of an approach at the outset, even prior to action in the school or classroom (McLaughlin & Mitra, 2002). Others suggest that action, even if mandated, will lead to understanding and motivation to continue (Connell, 2002). Some external reform organizations build flexibility into their model in order to incorporate teacher and school leader input. This bottom-up approach is intended to secure commitment as well as to achieve a better fit between reform design and the school context.

The designs also focus to different degrees on school and district structures and leaders to support the reform, and how to sequence the changes to be rolled-out. The two whole school designs require extensive alterations in school organization or governance before undertaking any significant changes in teaching practice. The two literacy initiatives focus immediately on modifying classroom practice. The first group wagers that school organization and climate are essential first steps to implementing and maintaining the kind of changes in teaching they seek. Reforms that seek instructional change on a small scale are less likely to rely on or seek significant organizational changes. Those reforms that target a smaller portion of the faculty concentrate on individual teaching and student learning as the foremost action—or even exclusive focus of reform.

Reform design and support decisions are also influenced by the priorities, capacities, and constraints of the external provider organization (Datnow, Hubbard, & Mehan, 2002; Kronley & Handley, 2003; Rowan, 2002). The five providers in this study differ in their origins, size, expertise, and funding mechanisms. This study includes reforms with roots on university campuses (Penn Literacy Network and First Things First); in a member association of state boards of education (High Schools That Work); a New American Schools project (Ramp-Up to

Literacy); and the entrepreneurial world of educational software (SchoolNet). The organizations range widely in size and resource capacity from the small, regional Penn Literacy Network to larger groups with extensive networks such as High Schools That Work.

Finally, readers should be aware that provider designs are not static (Berends, et. al., 2002; Datnow, et. al., 2002). Rather, they continually evolve and sometimes reinvent themselves in response to their work with schools, the changing policy climate, and the demands of the market. Expanding provider organizations face the challenge of simultaneously remaining faithful to the design's core principles and strategies that have fueled their success, and possessing the human and material capacity to meet school demands for their services. In our study, it is clear that each of the five designs and their organizations were evolving and wrestling with many of these tensions. The following discussion of these designs and accompanying provider support is based on the models and provider organizations at a particular point in time.

The Case Studies

The five designs we selected to study hold different assumptions and beliefs about what instruction and schooling should look like, and how change should unfold to achieve these ideals. In the cases that follow, we provide background information about each external reform organization and describe the reform model's theory of action and theory of student learning. Drawing on definitions from Hatch (1998) and Weiss (1995), we define *theory of action* as the beliefs and assumptions embedded in the design that concern what needs to be changed and how to achieve the reform's goals. We explore each provider's beliefs about how adolescent students learn and what conditions facilitate this process in our discussion of the design's *theory of student learning*.

Targeted Literacy Initiatives

There is widespread recognition that many students entering high school lack the literacy skills to complete grade-level work (Biancarosa & Snow, 2004). Two external reform models in this study target adolescent literacy. Both designs may impact subject areas other than reading and language arts, but the core skills emphasized are tied to reading comprehension, and oral or written expression. Targeted initiatives such as these typically focus on the instructional needs of a particular subset of students and teachers.

Ramp-Up to Literacy

Ramp-Up to Advanced Literacy I and II (RU) are literacy courses geared towards middle and high school students who are performing two years below grade level. RU is a complete 180-day curriculum that requires teachers to follow a pacing calendar built around particular literature, and to use very specific instructional strategies and student performance evaluations. The courses were developed by the National Center on Education and the Economy (NCEE), a non-profit organization established in 1987. NCEE has been involved in several standards-based reform initiatives, including America's Choice, the comprehensive school reform design from which RU evolved. NCEE decided to unbundle RU because districts and schools were attracted to this literacy safety net component, but could not afford or for other reasons were not interested in the entire model. Perhaps not coincidentally, this unbundling occurred as the federal government's fiscal support for comprehensive school reform entered a downswing.

Theory of Action. To roll out the unbundled RU, NCEE’s primary focus is on providing materials and training to the supervisors and teachers who will implement the course. The design calls for only a few organizational changes which address the needs of RU teachers and students. The provider suggests a role for school leaders to monitor and support teachers’ work with RU, and distributes a detailed handbook.

RU stands alone among the five providers in the level of detail and focus on a specific curriculum and approach to instruction (see theory of student learning, below). Teachers receive materials including research literature on literacy, monographs on particular aspects of reading instruction, curriculum units, and a detailed outline of the course. Teachers are expected to use the required literature, and set up classroom libraries with recommended books sorted by reading level.

Over the course of two years, teachers receive off-site training from NCEE staff that begins with a summer institute and follows up with two or more workshops during the academic year. The training is situated in the real work of the teacher-learner, focusing on the material and pedagogies that teachers will be using in class over time. The unbundled RU schools are under no obligation to assign and train coaches, although it is recommended. Supervisory staff members receive one day of training.

Theory of Student Learning. RU has a well-defined theory of student learning and instructional practice that is strikingly different from the lecture-driven approach typical in most high schools. This workshop model of instruction is built around a prescribed and paced set of daily routines (such as independent reading, read-aloud/think-aloud/talk-aloud, work period, and closing); classroom rituals (including consistent ways of entering the classroom, transitioning, and selecting books from the classroom library); and tools (such as readers’ and writers’ notebooks). The reform includes curriculum units built around specific literary texts, and instructions for the classroom libraries from which students make choices during independent reading time. Unlike some independent reading approaches, RU teachers actively model comprehension and monitor it; thus, at any one time teachers must be familiar with multiple texts. In addition, RU teachers are expected to conference frequently with students, assess their progress, differentiate instruction, and use small groups.

Like several of the reforms considered in this study, the RU design recognizes the critical issue of student motivation to learn. Efforts to address this challenge include giving students some choice of reading material, and employing strategies that enable students to demonstrate and use their knowledge within the classroom and in cross-age tutoring with elementary students. Cross-age tutoring gives students, “the opportunity to return to children’s books where they can learn the basics of comprehension strategies and develop fluency without fear of ridicule. Second, it provides authenticity to their work through the tutor/tutee relationship” (National Center on Education and the Economy, 2004, p. 10).

Penn Literacy Network

The Penn Literacy Network (PLN) is a small provider that currently works in three states—Pennsylvania, New Jersey and Delaware—and has been in operation since 1981.

Primarily on a fee-for-service basis, PLN offers individual training of teachers through staff development workshops, graduate-level coursework (awarded by the University of Pennsylvania), and mentoring programs. PLN is run by a very small staff that conducts most of the larger-scale trainings and coursework for teachers. The organization also maintains a pool of PLN-trained facilitators (who lead PLN trainings) and a team of mentors (who supply on-site staff development and coaching). Typically, the design is introduced to teachers through a personal relationship with a district administrator, school leader, or a teacher who has had prior experience or training with PLN. When the program is offered at a school, PLN seeks a working relationship with a district point person to ensure that the reform is supported, and trainings are recognized as accredited professional development courses for participating teachers.

Theory of Action. PLN focuses on teacher change and works to create reflective practitioners who are adept at teaching literacy skills across the content areas. By enlarging the capacity of teachers to engage in literacy, PLN seeks to have a transformative effect not only on instruction and student achievement in reading and language arts, but in all subjects. Over time PLN has developed a series of courses to train teachers from any discipline in literacy techniques that are rigorous and research-based. The design takes a non-prescriptive approach to professional development. Workshops and courses are intended to introduce a framework for building strategies and professional development that links literacy and student learning, and to support teacher efforts to try out new ideas in classrooms. As one provider liaison remarked, “My message is this is good instruction.” Provider liaisons argue that as teachers become believers in PLN, they are apt to share their experiences with colleagues in other disciplines and enlarge the PLN network at the school.

Theory of Student Learning. Conceptually, PLN coursework offers teachers practical ways to engage students that are based on a theory of five critical elements and four critical lenses. The five critical elements include teaching students to: 1) construct meaning in print according to their beliefs, attitudes, knowledge, and experiences in addition to what is written in the text; 2) write in order to learn and experience writing for different purposes; 3) select reading and writing both in and outside the classroom; 4) consider how language is used for different purposes; and 5) ask questions that help them become reflective and strategic learners (Lytle & Betel, 1996). Learning through the four lenses involves: 1) making meaning; 2) interaction with others; 3) reliance on the interconnected tasks of reading, writing, talking, and listening; and 4) a personal connection. In PLN classrooms, students have opportunities for choice and collaboration. They are encouraged to interpret and share what they are learning and their ideas are valued. This approach is constructivist in its pedagogical orientation. When PLN strategies are in operation, teachers and their students have ample opportunities to reflect, collaborate, and exercise choices in their approaches to teaching and learning. Learning takes on a social dimension and activities are chunked so that students moved around quickly in and through a variety of activities. PLN’s general model for student engagement includes moving from independent student work through a shared activity (such as pair-share), to a period of whole-class instruction, to a mini-lesson, and back to a shared activity. Every class does not contain all of these elements all of the time, but they are expected to be seen in one form or another in a PLN classroom.

The theory is not just “here’s the reading and read it,” there is always a motivating activity, an engaging activity, [or] focusing activity where the kids read, write, talk before they get started on the actual text activity for that day. If there’s a lecture going on, there is a note-making technique where kids are looking for certain elements... And there’s a lot of accountability every step of the way. It’s hard for a kid to sit out our protocol because the spotlight is on. It’s not where some classrooms, you have no idea whether a kid listened, didn’t listen, got it, didn’t get it. [In] this classroom there’s always feedback. If you’re reading, you’re writing something down to show me that you’re reading. If you’ve written something, then you are anxious to read it to someone else and share it and I can hear it. (PLN Provider Liaison)

Whole School Reforms

Whole school or comprehensive school reform approaches move away from reforms aimed at particular subject areas or special populations, to focus on improving the general conditions of a school (Bodilly, et. al., 2004; Desimone, 2002). These initiatives are guided by a core research-based vision or theory of action and include a broad range of supports to improve instruction, school organization, and relationships among school members. Schools engaged in whole school reform efforts often seek the assistance of an external provider (Hertling, 1999).

First Things First

First Things First (FTF) is an initiative of the Institute for Research and Reform in Education (IRRE), a non-profit organization that originated at the University of Rochester in 1989. The program was designed to serve students most in need, typically enrolled in high poverty urban schools. Over the past decade, IRRE has received substantial foundation and federal support to develop and expand the FTF model across the country. In 2004, FTF operated in over 65 schools, over one third of which were high schools (Institute for Research and Reform in Education, in press).

Theory of Action. The design has three goals: 1) to improve relationships among individuals affiliated with the school (teachers, students, and family members); 2) to improve instruction so that students are prepared for post-secondary education or high quality employment; and 3) to reallocate resources in support of the first two goals.

In the FTF design, schools are restructured into theme-based Small Learning Communities (SLC), a Family Advocate System (FAS) is established, and teachers participate in professional development focused on these two new structures and instructional improvement. Through the process of creating the SLCs and FAS in a school, relationships among teachers and with students and families are strengthened. The SLCs are expected to foster a professional community among teachers through joint planning of curriculum and instruction, and shared information about student needs. Students are assigned to an SLC where they remain for the duration of their time at the school. The FAS ensures that “every student is known—and watched over—by someone in the school who cares about that particular young person” (Institute for Research and Reform in Education, 2004, p. 7). In their capacity as a Family advocate, teachers and other qualified school staff oversee the needs of a small number of students in their SLC, and maintain regular communication with their students’ families. Collectively, the SLC structure, FAS, and instructional improvement, are intended to provide

students with a continuity of care; more personalized instructional time; high, clear, and fair academic standards; and diverse opportunities to learn. Teachers are expected to improve instruction, increase expectations of students, have greater flexibility to allocate resources, and share responsibility for student outcomes.

Roll-out of the FTF design is highly prescriptive and occurs over multiple years. In the first weeks of the planning year, the faculty is introduced to the reform and development of the theme-based SLCs is initiated. Teachers participate in professional development activities beginning in the planning year. These activities are on-going and occur in the SLCs and during professional development time periods. The FAS begins the following fall in the first implementation year. The design relies on a school-based School Improvement Facilitator (SIF) appointed by the district to oversee the reform. SLC coordinators lead their SLCs and spread information about the reform from the SIF and IRRE to their members. Buy-in from formal leaders is sought when the partnership is initiated but their role becomes less central as time passes. IRRE's provider liaisons closely follow the progress of their partner schools via regular communication, training, and classroom and meeting observations. IRRE support is on-going and tailored to address difficulties when they arise.

Theory of Learning. The FTF theory of student learning encompasses three broad instructional goals that comprise the acronym EAR: Engagement, Alignment, and Rigor. EAR is premised on the belief that students perform better academically and misbehave less when they are engaged emotionally, behaviorally, and cognitively in their learning and are supported by teachers with whom they have developed close relationships (Connell & Broom, 2004). Teachers are better able to recognize, respond, and adjust instruction to meet individual needs when teachers have close relationships with their students. Finally, when students are required to master content that is rigorous and aligned to state and national standards they will graduate prepared for post-secondary education and high quality employment. These FTF instructional principles are broad in nature and do not mandate a specific curriculum or pedagogical approach. As a result, provider liaisons believe the design does not conflict with school efforts to align teacher's work with state standards. As the reform has evolved, the instructional improvement component of the design is becoming increasingly specified. IRRE has created additional guidebooks, observation protocols, and training to further articulate the goals of EAR.

High Schools That Work

In 1987, High Schools That Work (HSTW) was launched by the Southern Regional Education Board (SREB)—a board composed of senior officials from 16 member states that works to advance education in the region. HSTW began with the goal of improving the outcomes of high school students enrolled in vocational programs. Today, there are over 1,200 HSTW sites in 32 states (Southern Regional Education Board, n.d.). SREB has also expanded the program's reach to students in grades 5-8 through its Middle Schools That Work initiative. The HSTW whole school reform model is typically funded through a direct contract with a school that has secured funding through government or private grants.

Theory of Action. The HSTW design seeks to “create a culture of high expectations and continuous improvement in high schools” (Southern Regional Education Board, n.d., p. 2) by improving teachers' instructional capacity, increasing professional conversations, and moving

staff through a process of strategic planning for the purpose of increasing student achievement for all students. To facilitate these changes, HSTW provides schools with a set of key practices that articulate what the provider believes will make an effective, high quality school. The key practices cover three areas: what high students should learn, optimal conditions for student learning, and the responsibilities of teachers. These principles offer guidance as schools develop improvement plans. In addition to the key practices, School Improvement Plans (SIP) reflect specific school needs identified early in the HSTW adoption process via a technical assistance visit (TAV). The TAV includes both a school self-evaluation and an evaluation by an external group of educators and community stakeholders.²

To further assist schools in implementing the reform, the provider assigns schools an HSTW consultant who functions primarily as a coach and resource bank. The school is also required to designate an on-site point person for the reform. These individuals and the formal school leaders are responsible for maintaining the school's focus on implementing the site plan. The bulk of responsibility for designing and implementing change in the HSTW model, however, rests with the school staff. In the typical roll-out of the design, school staff members are organized into semi-permanent, issue-driven focus teams. These focus teams present proposals for school-wide organizational and instructional change to the school community for adoption. HSTW schools are also expected to organize a school improvement team including, but not solely comprised of, one representative from each focus team in the school.

The HSTW design relies primarily on professional development to influence instruction and empower teachers with the knowledge to effectively participate in their focus teams. The model uses its large professional development network to provide a variety of off-site trainings and visits in order to exchange information and experiences with other schools and classroom teachers. Through these activities, educators learn new instructional techniques and methods that will increase academic rigor and improve student achievement. Schools and teachers are expected to select professional development opportunities based on the needs and goals identified by either the SIP or the focus teams. The design gives significant weight to teachers' interest when selecting professional development opportunities. While few of the techniques encouraged by HSTW are the exclusive property of SREB, several strategies for organizational change are commonly associated with the intervention, including eradicating low-level courses, increasing graduation requirements, developing an advisement and mentoring program, and introducing demonstration classrooms and block scheduling.

Theory of Student Learning. HSTW's fundamental belief is that "most students can master rigorous academic and career/technical studies if school leaders and teachers create an environment that motivates students to make the effort to succeed" (Southern Regional Education Board, n.d., p. 1). According to the HSTW director, a major goal of the reform is to "integrate the basic content of traditional college-preparatory studies in English, mathematics, and science with career and technical studies" (Bottoms, 2004, p. 439) in order to expose all students to this academic coursework historically taught only to college-bound students. HSTW is particularly concerned with the middle 60 % of students who require high quality instruction

² The composition of the external evaluation group varies but may include a representative from the local middle school (feeder school), a local business person, a parent, a school administrator from another HSTW school/district, a teacher, or a university representative.

in order to succeed and have the capacity to benefit from it.³ With appropriate support, HSTW upholds that these students will rise to the level at which they are expected to perform. In an effort to address the learning needs of these students HSTW staff focus school faculties (especially teachers) on the importance of providing all students with access to rigorous and demanding coursework even when this requires lobbying to alter statewide requirements. HSTW staff members also encourage teachers to actively and intentionally expect more from their students and provide appropriate support to achieve at high levels. The two most common means of providing support for the middle 60 % include personalized mentoring and advisement and opportunities for extra help with academic coursework.

Technological Reforms that Use Data to Inform Instructional Practice

The advent of standards-based reform and assessment has increased interest in how student-level data can inform curriculum and instruction. However, available research indicates that the process of collecting, maintaining, analyzing, and acting on data is a complex process that requires extensive preparation and collaboration (Lachat & Smith, 2005; Massell, 2001; Supovitz & Klein, 2003). Factors found to influence school and district data use include the types of data available to teachers, the technological capacity of the school, and the conditions and practices that support or inhibit data use. Barriers include lack of training and cultural resistance. Supporting elements include features such as strong leadership, a district-wide culture that supports data use for continuous improvement, structure for teacher support and training, and time for teachers to meet and review assessment data to inform instructional decisions (Lachat & Smith, 2005). The availability of computer software and the internet to harness large and divergent streams of data and make them available to teachers, parents, and school and district leaders is relatively new (Wayman, Stringfield, & Yakimowski, 2004). Research on this area of data use is only beginning to emerge.

SchoolNet

SchoolNet (SN) was founded in 1998 by an education software entrepreneur and policy analyst to help school districts use data to improve student performance. The for-profit company seeks to streamline district educational technology systems and implement software programs that are easily understood and utilized by teachers and administrators (SchoolNet, 2005). The rapidly growing company targets large school districts (with student populations over 20,000).

Theory of Action. The SN model assumes that by regularly “analyzing data, organizing curriculum, tracking instruction, measuring performance, and reporting results” (SchoolNet, n.d., p. 2), teachers and administrators will tailor curriculum and instruction to meet their students’ individual learning needs. As a result of greater teacher and administrator familiarity with and attention to students’ needs, academic achievement will improve. The model also seeks to foster a virtual professional community where educators and administrators share instructional practices, guidelines, and lesson plans via SN’s internet-based programs.

SN’s Instructional Management Solutions (IMS) are organized into modules available for lease individually or in combination. The modules perform such functions as tracking student data and generating reports; aligning and disseminating curriculum, instruction, and assessment;

³ The provider argues that most high schools have programs to address the needs of students performing in the top 20 % and bottom 15-20 %. The needs of the middle 60 % of students often get lost (Provider Interview, HSTW3).

providing benchmark testing; and integrating data from different systems to create a single repository—or warehouse—for the district’s data and other activities. The company defines the reform as a content-neutral design that can accommodate and integrate other district initiatives (such as particular curriculum, textbooks, and standards) under the SN umbrella.

SN plans, builds, and implements customized products under the direction of the school district. The district determines which modules will be purchased and for what purposes, the sequencing of the roll-out, and the types of training offered. A project team composed of district-identified staff and an SN liaison lead the day-to-day planning and implementation for all schools in the district. The modules are rolled-out in a five step process. SN begins by conducting a needs analysis. This is one of the few points when the provider is likely to have direct contact with school-based staff. Based on the needs analysis, a “Criteria for Success” document is generated that outlines the program goals, benchmarks, and responsibilities for SN and the district. Next, SN and the district develop a plan that includes decisions about curriculum, professional development, and roll-out. SN then builds the customized IMS and prepares supporting professional development materials. Once the IMS system has been approved by the steering committee, the system is rolled out in the district.

SN primarily relies on a train-the-trainer model to deliver information about the reform to teachers. The company offers a brief workshop for a subset of district staff and school-building representatives. Armed with SN reference materials, these individuals train their school-based colleagues and serve as on-site resources. Trainings explore concepts of data-driven school improvement planning, site/solution navigation, and support for the adoption process. For an extra cost, the company will provide additional workshops and refresher sessions, site visits, on-site support days, and on-line assistance for all teachers and staff.

SN has little direct contact with schools unless specifically requested by the district. The district defines and monitors the responsibilities of formal school leaders to support the use of SN products in the school building. To assess school-level use of the modules, the company relies on district feedback and computer-generated reports that count how many users access a product during a given time period.

Theory of Student Learning. SN is relatively silent on theories of student learning. This is consistent with the design’s content-neutral stance. However, the model does operate under the premise that a student’s individual learning needs can be addressed when teachers and administrators have access to and can analyze student performance data. In this model, regular assessments are expected to provide important evidence of student progress towards mastering skills and standards. The SN design is more reactive than proactive in its stance on rigor. The company provides assistance to schools and districts to meet externally-imposed expectations for student performance from state and federal requirements.

Cross-Provider Analysis of Design

In her 2003 article, Cynthia Coburn describes the conditions necessary for scale-up of educational reforms. She broadens the definition of scale-up to encompass the complexities of implementing a reform on an individual or school basis; expansion of the reform’s reach to more

teachers, schools, or districts; and the reform's sustainability over time. Her framework for scale-up includes four dimensions: depth, spread, sustainability, and ownership. She defines *depth* as reform that “goes beyond surface structures or procedures to alter teachers’ beliefs, norms of social interaction, and pedagogical principles as enacted in the curriculum” (p. 4). *Spread* refers to both the quantity of people or schools that have contact with reform materials, activities, organizations, or structures; and the extent to which the reform’s “underlying beliefs, norms and principles” (p. 7) reach other classrooms and schools. *Sustainability* is a critical feature of scale-up because, “the distribution and adoption of an innovation are only significant if its use can be sustained in original and even subsequent schools” (p. 6). In this paper, we consider sustainability to be a function of depth and spread. Without depth and spread, there is nothing to sustain. Coburn defines *ownership* as “creating conditions to shift authority and knowledge of the reform from external actors to teachers, schools, and districts” (p. 7).

In this section, we use Coburn’s (2003) framework—with some modifications—to explore how the five providers understand and support enactment of their reforms in the study schools. In particular, we focus on depth, spread, and sustainability for scale-up. Our data did not lend itself to an examination of providers’ experiences through the lens of ownership. The designs and provider organizations vary in the extent to which they focus on depth, spread, and sustainability of their reform and the strategies they use to facilitate these processes.

Depth

Coburn (2003) argues that the nature of change must be central in any analysis of a reform’s scale-up. To be authentic, the change must have characteristics of deep transformation including alterations in what teachers believe, how they interact, and the ways they teach. She defines teacher beliefs as “underlying assumptions about how students learn, the nature of the subject matter, expectations for students, or what constitutes effective instruction” (p. 4). Norms of social interaction include “teacher and student roles in the classroom, patterns of teacher and student talk, and the manner in which teachers and students treat one another” (p. 5). Pedagogical principles are the “ideas about what constitutes appropriate instruction” (p. 5).

The five designs share several core goals for high school reform that reflect much of the current research on key problems facing high schools. To a greater or lesser extent, all five seek a rigorous curriculum, differentiated instruction, and alignment with external standards and curriculum. With the exception of SN, the designs promote student engagement in learning as the key to motivate adolescents, make learning relevant, and foster greater mastery over subject matter. As our case studies suggest, however, the designs vary significantly in the approaches they use to realize these broad goals in schools. This variation is evident in decisions regarding the specificity of instructions that accompany the reform, reliance on leadership and school structures to support the reform, and the role of individual teacher in the reform.

Design Specificity

The five providers make different choices regarding which instructional and organizational tasks to elaborate for the enacting schools and teachers, and which tasks to leave for them to interpret and invent. Two designs included highly specified instructions for implementing critical components of their reform. The RU design moves beyond general pedagogical principles and strategies to include specific curriculum, delivered in a particular way

and sequence. (See Table 2.) The FTF design provides an example of high organizational specificity rather than instructional specificity to include detailed instructions around student-teacher ratios, specific tasks and responsibilities, and the roll-out sequence for the SLCs and Family Advocate System (FAS). (See Table 3.)

Table 2. Instructional Specificity

Highly Specified	Moderately Specified	Weakly Specified
Ramp-Up to Literacy	Penn Literacy Network First Things First High Schools That Work	SchoolNet

Table 3. Organizational Specificity

Highly Specified	Moderately Specified	Weakly Specified
First Things First	High Schools That Work Ramp Up to Literacy	Penn Literacy Network SchoolNet

Where highly-detailed courses of action existed, provider liaisons observed that well-specified design components could be difficult to carry out with fidelity. For example, the three FTF schools in our study often lacked the resources to maintain the desired student-teacher ratios for SLCs and the FAS, thus posing a potential threat to the relationship-building function of these structures. The few organizational specifications of RU required significant new resources (such as more staff and materials) or adjustments in existing ones that at least one school had difficulty maintaining. For example, without the 90-minute block or smaller class size, liaisons argued that teachers often encountered difficulty carrying out the conferencing and differentiated instruction required by RU.

It is difficult to specify every facet of a design, and thus, it is important to consider the extent to which key reform ideas and practices are left to the interpretation of schools and individual teachers (Ball & Cohen, 2002; Hatch, 2002). The FTF schools in our study rolled out the structures on schedule during the planning year. Despite the high level of organizational specificity, however, fostering the professional conversations envisioned in the SLC structure and the FAS remained difficult to realize and prompted IRRE to respond with supplemental support and materials to help fulfill the goals of these structures in FTF2.⁴

Less specificity around design components can support other goals critical to the reform. The PLN, FTF, HSTW, and SN designs offer broad principles and standards for classroom instruction that are applicable across the curriculum rather than intended for one content area or course. This stance is consistent with the PLN goal of infusing literacy practices throughout the curriculum. The HSTW design includes minimum instructional and organizational requirements for participation in the reform. Such changes are left to the school's faculty to identify and carry

⁴ Schools were given pseudonyms composed of the provider abbreviation and a number between one and three to reflect the length of time the reform had been in the school during the 2004-2005 school year. The number 1 denotes a school that was in its first year of implementation; number 2 denotes a school that was in its second year of implementation, and the number 3 denotes a school that had been using the reform for at least 3 years.

out. This approach is in keeping with the design's emphasis on bottom-up reform. The lack of instructional specificity embedded in the SN design is also consistent with the design's "content-neutral" stance and the provider's efforts to support the instructional priorities of its district partners. Information regarding how teachers can use student data and curricular and testing materials to inform instruction is offered, but the provider takes no position on what instruction should look like in practice.

While less specificity may foster school-, district-, and/or teacher-ownership of the reform, it often leaves teachers and administrators unsure about how to integrate design components into their work. We noted numerous examples of providers developing more guidance to clarify what they want to see in classrooms and in schools. RU liaisons were acutely aware of the difficulty in reaching instructional depth without the structural features and supports of America's Choice. NCEE added technical assistance to the menu of offerings available for purchase to RU schools. Lack of clarity around general instructional principles prompted IRRE to develop more detailed materials to help teachers recognize and translate FTF's instructional approach into practice by offering additional training and classroom observation protocols. While HSTW had not added additional specificity to their instructional component, the liaisons described plans to establish additional process-oriented requirements for participating schools, including a mandatory guidance and advisement system and use of HSTW's recommended curriculum.⁵ PLN has expanded its course offerings over time to other content areas for teachers who seek to build literacy skills among their students.

The provider liaisons recognized that fidelity to design could be affected by the current standards, testing, and accountability regimes, and considered whether and how their work would be aligned to schools' extant environments. While two RU liaisons argued test scores would rise if teachers adhered to the reform's strong instructional approach, they also acknowledged that the pressure to prepare students for state assessments was often overwhelming. In the non-America's Choice (AC) school, the liaison responded by supplementing the RU design with AC's test genre studies. Liaisons for the other reform models believed the task of alignment was easier due to less specificity around instruction in their designs. Even so, the provider liaison described alignment challenges at FTF2 when a state representative assigned to the school required lesson plans and a curriculum framework that met state requirements. The provider's staff responded by including this state official in FTF meetings and trainings, and by developing materials to incorporate the design's principles into the state's frameworks. The HSTW design takes a different approach to state standards. This model, founded by a regional group of state leaders to improve educational outcomes in member states, actively seeks to change state requirements to align with the standards advocated by HSTW. A provider liaison believed the major implementation challenges HSTW2 faced were state and district graduation requirements that did not meet HSTW's demand for high expectations. The liaison encouraged HSTW2 leaders to lobby the state to for the provider's more rigorous expectations.

⁵ The recommended curriculum outlines the quantity of courses and, in some cases subject matter, required for graduation but does not specify course content. (Southern Regional Education Board, 2005)

Leaders and Structure

The provider liaisons shared a conviction that leadership is crucial to the reform's prospects in the study schools, and attributed some variation in implementation to the role of these key individuals. There was not a similar consensus among the liaisons regarding the role school structures play in supporting a reform effort. In both cases, however, the designs did not always create the leadership or structural conditions liaisons believed were needed for their reform to succeed in the study schools. Such gaps highlight the difficult reality providers face in remaining true to their design's philosophy within the constraints of their organization's resources, other priorities of the model, and perceptions of the market.

As a small organization, PLN chooses to focus its limited resources on individual teachers. PLN liaisons believed their reform was strengthened when school administrators attended the training with their teachers, yet the model does not require leaders to participate in these activities. School leaders are only asked to assume a non-intrusive stance that will free teachers to explore and take risks. RU liaisons believed formal leaders were critical to the reform, citing the need for a firm grasp of the program and strong managerial skills to effectively handle the initiative's administrative features. However, the RU design asks more of formal leaders than PLN. Leaders are expected to oversee the reform via monitoring teacher use and maintaining the structural conditions (such as low student-teacher ratios, block schedule, and looping). The RU design also recommends new leadership positions in the form of literacy coaches to provide instructional support for teachers.

The FTF design relies heavily on new leadership and school structures to implement the design, yet traditional roles and structures also remain critically important to the reform in its enactment. As described in the FTF case study, the School Improvement Facilitator (SIF) is expected to monitor and move the reform forward and the SIF and principal should have a partnership that operates "like a hand in a glove." Despite this vision and FTF's long-term goal of distributing leadership throughout the school, the liaison believed the principal would be critical to the reform's success in FTF1.

If [the principal is] fully behind it, which he seems to be, and he stays the course like that and supports the teachers and comes to us or lets the teachers come to us or lets [the SIF] come to us and say, look, this is where we need the support, what can we do? That, I think, will be wonderful. Because I think that's going to... make or break, is school administration. And [the principal has] a firm relationship and handle with [the] assistant principals. (FTF Provider Liaison)

Sometimes required changes are implicit and add responsibility at a number of levels. The SN model relies extensively on school and district infrastructure and leadership to foster deep change. Teachers' ability to use the IMS effectively depends on the coordinated efforts of a broad network of teachers, administrators, and technology and curriculum department staff in order to provide information that is accurate, timely, useful, and accessible. In practice, however, these roles and responsibilities are articulated and activated by the district. The HSTW design did not always offer the support or guidance leaders needed to carry out the reform in the schools. Yet the role of leaders was considered key to the reform's success. An HSTW liaison stated that when strong formal leadership in a school leaves, reforms tend to die.

Some of the providers are modifying their designs to address gaps between those school levers targeted in the design, and the levers liaisons believed were necessary to move the reform forward in the schools. Recognizing the need, HSTW had begun developing more leadership training and support. Where gaps existed and design modifications had not been made, liaisons frequently had to piece together individual solutions for their schools.

Teacher Motivation and Professional Development

The designs reflect a belief in the importance of building teacher commitment to engage in and learn about their reform ideas in meaningful ways, yet this commitment is sought through different strategies, reflecting a split in the literature. The HSTW and PLN designs seek teacher commitment as a condition of participation. Both designs also devote time in the initial stages to deep exposure and conversation about the reform ideas, an approach supported by some researchers (e.g., McLaughlin & Mitra, 2002). The two designs are purposefully fluid, allowing teachers the opportunity to adapt the reform to the needs of their school or classroom context. In this scenario, professional commitment emerges as teachers refine ideas to fit their context. Teachers are typically given the freedom in both HSTW and PLN to choose which instructional strategies they will implement and when. This process lends an important professional empowerment motivation as well. While this type of strategy is more likely to garner buy-in, it is time-consuming, absorbs scarce resources of both the provider and school, and often results in a range of approaches and outcomes.

As conceived, RU and FTF take a different approach. These two designs mandate teacher action first (accompanied by highly-specified instructions). The RU design suggests that commitment comes when teachers master specific instructional improvement ideas and actions and see improved student outcomes. FTF's founder has argued that teacher commitment and belief occurs in the *doing* of the reform. For this reason, the FTF design does not initially seek commitment from teachers, or other key stakeholders such as parent groups, students, or community leaders. "Experience shows us that buy-in does not occur in the vast majority of these stakeholders until the reform is implemented and shows early signs of success that are meaningful to them." (Connell, 2002, p. 2). FTF's stance showed signs of softening, however. Based on the high interest that the student engagement in learning component generated among teachers, IRRE was beginning to introduce these concepts earlier in the roll-out. According to one FTF liaison, teachers wanted to "get into real work" in the planning year. When they did, the liaison observed, teachers "buy-in on a different level."

Transmitting knowledge about the reform to teachers is a critical piece of fostering deep change and engendering commitment. The professional training around the reform reflects provider understanding of how adults learn and are motivated as well as costs, and provider capacity. Providers make decisions about who (e.g., consultants, provider staff, or school- or district-based educators) transmits reform knowledge to teachers and in what context (e.g., on-site or elsewhere); the frequency and duration of training; and the continuity⁶ of that training over time. (See Table 4.) Research literature indicates that frequent opportunities to work with the same or similar ideas and content over time on material that is embedded in their work is one of the more effective approaches to professional learning for teachers. The train-the-trainer

⁶ A connected or logical progression in training focus.

approach, in which a teacher or other school leader receives training and then turns around to impart that knowledge to school colleagues is often considered less effective unless the teacher representative has a lot of training. Yet, there are trade-offs in cost and efficiency. The train-the-trainer method is less expensive for both schools and providers. For some reforms type of training is also consistent with the reform’s bottom-up emphasis.

Table 4. Overview of Typical Reform-Focused Training by Provider

	Primary Trainer	Training Location	Frequency	Duration	Continuity
Ramp-Up	Provider	Off-site	Three times per year (9-10 days)	2 years	Yes
Penn Literacy Network	Provider	Varies, a school site in the district	Courses meet at regular intervals (determined by the district) during semester Workshops	Length of enrollment	Yes, in courses
First Things First	Provider & School’s Reform Leader (SIF)	On-site	Frequent in planning and first implementation year; Less frequent after two years, but available as needed	On-Going	Yes
High Schools That Work	Provider, Contracted Trainers, & HSTW’s Network of School-Based Educators	On- and Off-site	As needed; Teachers are required to attend 2 sessions per academic year	On-Going	No
SchoolNet	School or District Staff trained by SchoolNet Trainers	On-site	As requested by district	As requested by district	Yes, as directed by district

As designed, RU and PLN rely heavily on direct training from the external provider’s staff to transmit information about the reform. RU trainings center on the curriculum that teachers deliver, and occur over an extended period of time. The central weakness of this approach—and one that our liaisons were aware of—is that teachers do not necessarily have access to a knowledgeable person on-site to help them on a day-to-day basis. Again, coaches were recommended in the study schools but not required. According to one RU liaison, “You

absolutely need coaches and/or assistant principals who are going to monitor it, support...ultimately supervise it so that faithful implementation does take place, and take root.” There was a tension between the liaisons recognition that adult learning needs exceeded the design and the appeal for schools of a less expensive option for school reform. “We had a lot of people interested in the literacy safety net RU, who could not afford the whole design.” Like RU, PLN staff members provide direct training through workshops and courses. The quantity and scope of the workshops are determined by the district. In the courses, teachers have contact with PLN staff on a regular basis, allowing educators to develop relationships with their PLN trainer. Introductory courses serve as prerequisites for additional classes, lending continuity to the training.

In sharp contrast to the RU and PLN use of direct training, SN relies heavily on brief train-the-trainer sessions. Following a brief orientation to SN products given by the SN staff or contracted trainers, and school and district staff train their colleagues and provide on-site support. The liaison described common problems with this method of training in SN1. Teachers and principals did not understand how to link the data to improving student performance—a key goal of the reform—after participating in SN’s turnaround trainings. The liaisons noted that the three SN districts in this study supplemented their provider trainings with district-led professional development.

As whole school models, both HSTW and FTF offer broad-based training opportunities but the two models differ in focus and the continuity of that focus over time. HSTW training reflects a heavy emphasis on teacher-identified needs and interests framed by school goals and the needs of the focus teams. Knowledge is delivered by professionals and teachers primarily through off-site visits to model schools or attendance at national or regional conferences. These professional development opportunities are of short duration, often composed of single opportunities. Teachers are expected to return to their school to share what they know. While this approach builds on the reform goal of teacher ownership over change, the method lacks continuity and can dilute exposure to the strategies necessary to translate reform ideas and principles into practice. FTF training is conceptualized as an on-going process for the life of the reform that supports the design’s key reform strategies—the SLC structure, FAS, and instructional components. Planned training around the three strategies is offered in correspondence with the roll-out schedule. Additional training is provided in response to difficulties with implementation identified by school or IRRE staff, and as FTF develops materials that further explain design features (e.g., EAR and FAS). Training is provided by both IRRE staff and school-identified reform leaders including the School Improvement Facilitator and the SLC coordinators. These school reform leaders receive extensive training directly from IRRE staff.

The five providers share a pattern of expanding professional development options, often through the use of multiple strategies in addition to teacher training. For designs that rely on training, such opportunities are becoming more formalized and plentiful. Both RU and SN have introduced a certification process by which school- or district-based staff is prepared to train and support their school colleagues. Trainings are also supplemented with other professional learning opportunities such as technical assistance visits and mentoring in the case of RU, and mentoring in the case of PLN. RU prepares school leaders to provide school-based support in

addition to provider-led training. SN is expanding its professional development offerings to offer more opportunities for direct training from SN staff. RU, PLN, and SN will provide on-site technical assistance to schools for an additional cost.

They're realizing after a year or two that, although the professional development is powerful, the site-based technical assistance can't be under-imagined....and...they discovered that...they still need an outside eye to come in and help monitor, assure quality, and to provide additional, site-based assistance. (RU Provider Liaison)

Provider Knowledge of Deep Change

As noted in the methodology section, the five provider organizations and liaisons interviewed held varying degrees of knowledge about how teachers and schools were incorporating reform ideas into their beliefs, instructional practice, and norms of social interaction in the study schools. This variation can be explained in large part by the designs and the opportunities provider liaisons had to interact with teachers and observe classroom-based activities. Provider knowledge of how reform ideas are being translated into school and teacher practices influences the adjustments and assistance these organizations can offer to support implementation in a school.

The RU, PLN, and SN designs provide few if any opportunities for provider staff to visit classrooms where the reform is being enacted unless the school purchases additional support. In the two targeted interventions (RU and PLN), liaison knowledge of the study schools was often gleaned from individual teachers enrolled in provider-led training sessions, and general experiences enacting the design. When schools purchased additional supports such as mentoring and technical assistance visits, the liaisons were able to gather more direct knowledge of implementation. The SN design employed few mechanisms to assess deep changes in individual teacher practice and beliefs. Indicators of use described by SN liaisons were limited to feedback from their district partners and SN-generated summary reports that counted how many individuals accessed the system within a particular time period. The liaisons rarely visited classrooms or had direct contact with teachers in the study schools.

The two whole school reform designs include a central role for the provider liaison to facilitate the reform. FTF and HSTW provider liaisons visited the study schools regularly over time, met with teachers and staff, and observed classrooms and staff meetings. This frequent and extensive contact with school staff enabled the liaisons to develop a more robust understanding of the level of depth around their reform at the individual teacher and organizational levels in the study schools. FTF liaisons maintained close communication with the schools via e-mail, phone, and in person during the planning phase and implementation. FTF staff members conducted observations and provided direct training with the SLC coordinators and the entire staff.

We tend to know what's going on [because] we will sit in on several SLC meetings during common planning time in any given school...We go around and see what people are doing in their family advocate groups. We also go into classrooms and see what's happening instructionally. (FTF Provider Liaison)

Promises and Challenges

Not surprisingly, liaisons from each of the provider organizations were strong believers in their designs, though they were also aware of problems. Three attributes of any particular design component seemed to influence how providers assessed the component's success or difficulty in the schools. These factors included: 1) the complexity of the design component, 2) the level of teacher buy-in it generated, and 3) the resource demands it placed on enacting teachers, schools, and districts.

When asked about promising adoption of reform ideas in the study schools, provider liaisons tended to focus on those components that generated teacher enthusiasm. Liaisons noted that strategies for student engagement in learning resonated powerfully with teachers, garnered buy-in, and tended to be the most successful aspect of implementation in schools. FTF, for example, found teachers were enthusiastic about and understood the design's student engagement concepts easily and were able to translate them into practice. An RU liaison made a similar observation, "almost universally teachers and kids report back being more engaged in RU than they are in their other classes. And this engagement has been transformative for a lot of kids, and for a lot of teachers." The liaisons also identified other reform components that generated teacher enthusiasm as successful. PLN staff attributed the interest teachers acquired in their professional development experiences and the resulting snow-ball effect on colleagues, who subsequently enrolled in PLN activities, as a sign of the reform's success. HSTW liaisons, too, believed their network approach to professional development was a strong and motivating aspect of their design for teachers.

While teacher support is desirable, it does not ensure a particular reform idea has been translated into deep changes in beliefs or practices (Ball & Cohen, 2003; Spillane, 1999). Challenges to the design's fidelity and the complexity of the desired changes can constrain the depth a particular reform idea achieves in a school or teacher's practice. Provider liaisons recognized that educators' ability to maintain fidelity to program principles could be constrained by their ability to access, and effectively utilize and manage organizational resources. For example, roll-out of SN in the SN1 district was shaped in part by the capacity of each school's computer infrastructure.⁷ Efforts to maintain low student-teacher ratios were often difficult. A liaison observed that most FTF schools had SLCs composed of 12 to 18 faculty members, rather than the ideal of 12. Similarly, an RU liaison noted that large urban schools often did not generate sufficient general fund dollars to support lower class size requirements. Even when structural features were in place, realizing the intended deeper instructional or organizational outcomes of those structures was often difficult. SLCs in FTF2 were "struggling with how to be a cohesive group" two years after the reform had been introduced, according to the liaison. The focused conversations around instruction, school climate, and organization advocated by HSTW tend to be difficult to fully realize in practice. The more complex pedagogical goals can also be difficult—a fact discussed by RU and FTF liaisons. RU liaisons staff attributed this problem to the lack of sufficient oversight and feedback from knowledgeable experts on which NCEE's whole school reform (America's Choice) relied.

⁷ SN1 did not face these technological constraints.

Spread

All five providers seek to spread their reform ideas; however, this desire is reflected to varying degrees in their designs. Spreading the reform yields broader support for the initiative in the school and in the broader educational environment. As organizations that rely on external funding sources, scaling-up the design can also generate needed support to sustain their work. Coburn (2003) argues that spread must be examined within a classroom, school, or district in addition to the outward spread to more classrooms, schools, and districts. She contends that this within form of spread is present when the reform ideas have been embedded into policies, procedures, and routines that extend beyond the “specific reform-related activities or subject matter” (p. 7). In this section, we examine the emphasis the five providers place on spread and the strategies used to facilitate this process in the study schools. As with issues of depth, the decisions associated with spread reflect both provider priorities and constraints. The reform ideas that providers perceived to spread more easily or with greater difficulty followed a similar pattern associated with the particular design component’s complexity and ability to generate educators’ buy-in.

Strategies for Spreading Reform Ideas

We observed individualistic and structural approaches to spread among the five providers. The individualistic strategy relies on peer sharing of information that is largely unplanned and informal. In contrast, structural strategies employ organizational features of the school and create roles for key leaders in the school, district, and state to facilitate spread.

In the individualistic approach, teachers who have direct contact with the provider (via training, coaching, and/or access to materials) are the primary conduits through which knowledge is disseminated. This mechanism is unpredictable but places few demands on the provider or the school. Costs tend to be low and minimal planning is needed. Both PLN and RU welcome and encourage the spread of reform ideas when it occurs but do not place a strong emphasis on planning strategic activities to facilitate spread. The expansion of the reform to the entire PLN3 faculty offers an example of how this informal, low-cost strategy for spread has been successful. PLN’s approach to spread is consistent with the reform priorities, and the philosophy and capacity of the organization. As a small, regional organization, PLN has thus far concentrated its efforts and resources on training and coaching individual teachers who wish to expand their knowledge of literacy instruction.

We can't do everything overnight. You can't change everybody's teaching overnight. It becomes a matter of we want to identify a few areas where we think we can pull our resources...matching observations, teacher leadership. And [we want to] be able to work at a few things at a time. And make it systemic in that you are building on to that initial piece a little more. (PLN Provider Liaison)

Like PLN, the RU design targets individual teachers who are engaged in literacy instruction, but adds two planned strategies to expand the reach of the reform within a school. Schools are asked to schedule a formal meeting for RU teachers to share the reform ideas with colleagues and encouraged to appoint a school-based literacy coach to facilitate the spread of ideas. The provider liaisons perceived that the design had influenced other teachers’ approaches to instruction via this spread strategy.

There's a lot of buzz that goes through the school initially. And how you're getting those kids to produce schoolwork or behave long enough so others can produce it...So a lot of what I've seen happen, especially here...is these rituals and routines...of classroom management have been adopted by other content areas. (RU Provider Liaison).

Similarly, a liaison noted that teachers in RU3 had, in fact, made presentations to their colleagues regarding the benefits of the reform's rituals and routines as a strategy to garner student motivation to learn. RU's approach is consistent with the focused nature of the reform on literacy, and NCEE's commitment to contain costs.

In contrast, structural approaches to spread rely on organizational configurations, school leaders, and jurisdictions (districts and/or states) to facilitate spread. These approaches are found in the three designs that seek to spread reform ideas throughout their partner schools. For HSTW, FTF, and SN, altering the school climate and widespread faculty involvement are key mechanisms to foster changes in instruction. Conduits for sharing knowledge about the reform are built into these structures and roles.

The HSTW design calls for new structures and activities to facilitate spread of reform ideas through the school but leaves the responsibility for developing and activating spread strategies to the school. Schools establish on-site demonstration classrooms where teachers can observe and share ideas. This flexible, structural approach to spread reflects the HSTW philosophy that ideas originate with educators and are powerful when shared with peers. However, that flexibility can result in wide variation regarding the capacity of these structures to facilitate spread. Provider liaisons noted that the roles of the focus team leaders and the school improvement team often varied widely and teacher participation in off-site activities was limited. The design also seeks to influence state policy and encourages schools seek support for the reform from the district and state. As noted earlier, one liaison encouraged the school to advocate at the state-level for HSTW's more rigorous academic standards.

For FTF, saturating a school with reform ideas is critical to achieving the core design goals of improving instruction and relationships among all school members. FTF mandates spread through new organizational structures, the physical reorganization of students and staff, and newly-created reform leaders charged with communicating the design principles to the faculty (e.g., the SIF and SCL coordinators). The SLC structure is intended to be a permanent feature of the school infrastructure. The design creates regular opportunities to collectively explore reform ideas among SLC members through a common planning time and shared responsibility for a group of students.

While the primary SN mechanism to spread ideas and practices through the schools is the train-the-trainer model, when and the extent to which this role is utilized is heavily dependent on the top-down press from district and school administrators. In the three study districts, spread was incremental and controlled by the district. For example, the SN-trained school leaders in the SN1 district learned about the reform in cohorts of 25 schools over the course of multiple years.

Spread Between Existing Sites and To New Sites

Given this paper's focus on the provider, we also explore the spread that occurs between providers' sites and to new sites. Sometimes this type of spread supports reform goals in a school, as is the case in the HSTW design. For all five providers, this spread also plays a role in sustaining and strengthening both the models and the external reform organizations.

The HSTW model places more emphasis on across-site networking to share and spread knowledge than the other providers in this study. Teachers are encouraged to participate in off-site training such as national meetings and visits to other schools in the HSTW network, and share their knowledge with their school-based colleagues. Liaisons observed that instructional practices and organizational structures often spread more rapidly between HSTW schools than within schools. While this type of spread is used less systematically by the other providers, when used it can help providers convey reform ideas to the school. For example, IRRE connected administrators from FTF1 with staff in their flagship program to help FTF1 and the district understand the design in practice.

The strategies employed by providers to facilitate spread of design ideas within partner schools and districts can expand interest in the reform to other potential clients and strengthen the provider's existing network and resource base. For example, PLN relies on the same individualistic strategy to spread the reform to additional teachers and schools. This informal, word-of-mouth marketing strategy has sustained the organization for over 20 years while allowing the organization to focus its limited resources on training and coaching teachers. In addition to satisfying a market demand and increasing revenue for NCEE, the presence of RU in schools offers the added benefit of spreading the NCEE name and philosophy to new markets. In this sense, RU can create new demand for other unbundled components of NCEE's whole school reform (AC) such as the model's technical assistance. Finally, the provider organizations recruit school-based reform leaders to share their experiences and assist new schools with implementing the reform. Several of the provider liaisons interviewed were themselves once employed in schools or districts using these reforms.

Promises and Challenges

Individualistic models tend to spread ideas more slowly but are far less costly than the structural approaches used in this study. The individualistic strategies also hold potential for building high commitment from participants but may be less likely to garner the buy-in of recalcitrant teachers or reform-weary teachers who wait for strong leadership commitment before they engage. In contrast, structural models of spread are costly, more difficult to implement, but can expand the reach of the reform more quickly.

In describing factors that contribute to the successes or challenges associated with spread, the provider liaisons identified the same factors that influenced the quality of depth in their partner schools. Specifically, those ideas and practices that were more complex and/or consumed more resources to maintain tended to spread with greater difficulty. For example, the RU liaisons observed that the small group learning activities and student conferencing spread slowly because such reforms take time and demand on-going support for teachers with RU training to grasp these ideas. Similarly, the spread at high levels of instructional practices between teachers within the HSTW study schools had generally been slow. The FTF provider

liaisons observed that the study schools established the SLC structure that should facilitate spread of ideas, yet the SLCs were highly variable within a school based on individual capacities within each group.

Sustainability

Even with the most successful strategies for depth and spread, sustaining a reform over time poses a profound challenge for schools and individual teachers. Faced with competing policies and priorities, staff turnover, and resource constraints sustaining new practices has proven to be difficult at every level of our educational system (Berends, et. al., 2002; Coburn, 2003; Elmore, 2004). Coburn argues that sustained use of a reform is even more difficult when the innovation originates with external organizations and relies on a “short-term influx of resources, professional development, and other forms of assistance” (p. 6) to implement the reform. The degree to which the depth and/or spread of a given model’s ideas, practices, and beliefs have penetrated a schools and district is critical. Without achieving a noticeable amount of depth and spread there is nothing to sustain.

For the majority of the study schools, the liaisons could only speculate on future sustainability as they were still in the midst of implementing the design accompanied by the influx of financial and technical support described by Coburn (2003). In four of the 15 schools, provider liaisons voiced some uncertainty regarding whether the reform would continue in the near future. Insufficient financial support, widespread turnover, and wavering commitment to the model were identified as the culprits. For the remaining schools, the liaisons were cautiously optimistic about their reform’s prospect, acknowledging similar threats to sustainability of resources, turnover, and competing school and district priorities. Provider liaisons described factors contributing to sustainability that fall into two arenas: characteristics of the model and technical assistance offered by the provider, and the school and district context in which the reform is situated. Not surprisingly, there was interaction between these two areas. When the school and district context did not support the reform, the providers often compensated by elaborating the model and supplying additional technical support.

School and District Contexts

Schools and districts are complex, politically-charged, and interconnected systems that are answerable to changes in emphasis from district, state, and federal policymakers. Providers enter these schools and districts as hired organizations, typically lacking significant financial or legal authority to leverage desired changes in the face of competing priorities. In this context, provider staff considered the school’s and district’s capacity to finance the reform, school and district leadership, and competing priorities as influential in their designs’ success and sustainability in the school.

School and district funding decisions influence both the length of time a provider is able to offer support, and commitment to the reform on the part of the school and district. As Coburn (2003) suggests, external reform models’ reliance on an influx of financial support can render the model particularly vulnerable to competing priorities. For providers willing to compromise on any number of design requirements in the study schools, the absence of funding was the likely deal-breaker. IRRE worked for over a year in FTF2 without payment from the district. The provider was torn, according to the liaison. This district’s FTF schools were in “desperate need”

and use of the design showed signs of improving teacher-student relations, yet, IRRE could not afford to provide their services for free indefinitely. Financial constraints also plagued PLN. “Our biggest problems in recruitment come with how [you] are structuring the teacher payments. And when [teachers] have to pay the whole amount up front.” The PLN1 district required teachers to pay up front which the liaison believed limited the reform’s reach and stalled further provider involvement in the district. PLN had yet to be paid for their work with teachers in PLN2 as well.

In other cases, school or district decisions to pursue funding opportunities tied to other reform initiatives had the potential to compromise the provider’s reform. The two-year lifespan of the RU implementation raised this question more quickly for this provider than the other organizations. The RU3 liaison expressed concern that the initiative would be watered down despite good intentions when a new foundation grant or other grants entered the picture. However, most liaisons voiced optimism, arguing that their reforms would not be compromised by the entrance of another grant program, given the compatibility of their model with the new initiative, or deep incorporation of the design’s core principles in teacher beliefs and practices, and—in some cases—school norms.

Repeatedly, the provider liaisons identified the central role of formal leaders at both school and district levels in sustaining the reform. Despite efforts to buttress their designs against leadership turnover, the liaisons believed the best chance for sustained implementation was stable, strong leadership that prioritized the principles of the external provider’s reform. This belief is supported by substantial research on implementation of external reforms (Berends, et. al., 2002; Corcoran, 2003; McLaughlin & Mitra, 2002). Conversely, it was the frequent turnover, particularly of leaders who had been trained and/or deeply embraced the reform’s core principles, that liaisons considered one of the most significant threats to the sustainability of their designs. The widespread turnover of district and school leadership in the SN2 district left the reform’s future up in the air.

When the staff changes, you’re really having to do [the sale] again, even though it’s already been purchased. I mean, it sounds silly, but if you want to keep it alive you got to keep reengaging the new staff. So I am now reintroducing the project. (SN Provider Liaison)

According to a PLN liaison, the district superintendent’s ardent support for the reform led to expansion and sustained use in PLN3. Similarly, weak implementation in PLN2 was attributed to the distracted focus of PLN’s chief advocate in the district. The liaison believed strong leadership at the district level helped sustain the reform in HSTW3. At HSTW2, the primary change agent was the principal who arrived at the school accompanied by—at his request—the HSTW reform. Now that the principal has retired, the liaison was uncertain who would step into this leadership role, and if the reform would be sustained at the school.

We argue that the perceived vulnerability to district and school context stems from providers’ lack of significant power to ensure and maintain faithful execution of the design over time. In other words, as outside entities providers are easily susceptible to such context-specific factors as turnover in leadership and shifting policy directives. To compensate, we observed that

the providers employed several mechanisms to mitigate threats and maximize opportunities for sustainability around these district and school factors. Some mechanisms are embedded in the designs while others were developed during providers' on-going work with schools.

Design and Provider Contributors to Sustainability

Many researchers contend that scaling up reforms in schools depends on a strong foundation of the reform's first principles and philosophies built into a school (Corcoran, 2003; Datnow, Borman, & Stringfield, 2000; McLaughlin & Mitra, 2001). School-level buy-in to these core principles will help sustain the reform when competing policies and priorities arise. In several cases, provider liaisons were optimistic that new initiatives would not destabilize their reform because teachers and the school had incorporated the design's core principles into their practice and operations.

Again, the providers identified design elements that fostered teacher commitment as key to sustaining changes in individual teacher practice and in the school, but the models sometimes conceptualize teacher roles differently. In the RU and PLN designs, individual teachers trained in the reform's instructional strategies are likely the strongest advocates for the reform and play a powerful role in sustaining the initiative in their own practice and in the school. The HSTW and FTF designs seek to buttress their reforms in unstable school environments by securing teacher commitment not only by learning about the design's instructional principles, but also by sharing responsibility to sustain the reform. The HSTW design does this by enabling teachers to identify problems and create solutions for their school. In this scenario, the provider organization is "the Home Depot of school-reform," lending support for school-identified needs. These provider liaisons believed that by ceding more responsibility and authority to teachers, educators would be more invested in the reform and sustain it. While SLCs in FTF schools are expected to localize the resources and attention of the reform to small(er) groups of teachers, in practice, the provider liaisons continued to rely heavily on formal school leaders to support the reform.

The bottom-up approach to school reform found in HSTW raises another attribute of this design and of SN that helps these models survive in environments with competing priorities. Both models are intentionally flexible to support changing priorities. The SN design is "content-neutral" and provider liaisons considered it part of their work with the district to incorporate other initiatives under the SN umbrellas. This incorporation work was conceived by the liaisons as an on-going effort through the life of the reform.

Finally, the providers and their liaisons have argued that prospects for sustainability are enhanced when their organization remains involved for extended periods of time. For example, IRRE does not envision an exit strategy for FTF schools. Instead, the organization seeks to remain involved with their partner schools for the long term. The IRRE founder observed that outside consultants who have become very familiar with their partner schools are well-positioned to offer valuable, on-going support.

Having outside consultants who know what the district is trying to do and continue to look at and support the district's reform work makes sense. These consultants have longstanding relationships with staff at all levels of the system and have a proven track record of bringing value added supports. This is not

something that districts want to give up because the initial funding runs out. In some cases, millions of dollars have been invested in forming these relationships between IRRE and district and school partners; it makes little sense to IRRE or its district partners to arbitrarily terminate these relationships in order for districts to demonstrate their “self-sufficiency.” (Institute for Research and Reform in Education, in press, pp. 15-16)

Conclusion

A key observation that emerges from a Coburn (2003) analysis of the enacted designs is the range of direct knowledge providers possessed about the changes underway in the schools and classrooms in which they worked. Liaisons for SN, PLN, and the unbundled RU school relied heavily on information gleaned from interactions with teachers outside of the classroom (except SN), general knowledge of the reform, and the interpretations of district and/or school leaders regarding how implementation was unfolding and where supports were needed. An equally important aspect of inculcating deep change in instruction and structures is a clear sense of what is expected. Spillane (1999) argues that teachers, based on their will and prior experiences, interpret and implement reform ideas and practices with very different levels of understanding about the core principles that guide a reform. Given the variability of teachers’ “zones of enactment” (p. 143), teachers and school leaders may not recognize disparities between surface level adoption and deep incorporation of design ideas into teacher practice and school structures without additional oversight and support to help steer them towards the reform’s more challenging principles and practices. When the provider does not have direct knowledge of changes in teacher practices, the responsibility for ensuring deep change around reform ideas falls largely on the shoulders of the school or district staff members who may themselves have limited understanding of the reform ideas.

The provider liaisons in this study tended to identify tasks that were adopted and spread most readily as those that were less complex, demanded fewer resources, appealed to teachers, and had immediately observable results—e.g., classroom practices that elevated student participation and engagement, or structures like SLCs that could be easily recognized as reform. These design components address real problems educators often face and, liaisons believed, may be easier to incorporate into their class work. Not surprisingly, the provider liaisons observed greater difficulty realizing more complex principles in schools and classrooms. The surface structures or activities described by Coburn (2003) often did not easily translate into deep changes in a school’s norms of interaction, and teacher beliefs and practices.

As reforms external to the school system, these providers entered schools and districts at the invitation and will of their host. This can be an asset but also poses associated challenges. By originating from outside the school system, external reform organizations can infuse new ideas and energy for reform into the schools and offer needed research-based guidance and technical support. External providers contribute an outside perspective and assessment that can spur new thinking and change. However, the independent nature of these organizations also lends a layer of complexity that providers, schools, and districts need to recognize and understand. We observed that much of the providers’ designs appeared negotiable in the study schools. We speculate that the provider organizations’ willingness to modify their designs once

the provider-school/district partnerships were underway stemmed from the limited power these organizations had to leverage change. External reform organizations such as the five in this study possess advisory rather than financial or legal authority to foster change in their partner schools and districts. These external providers did not hold the legal power to oversee the initiative such as is found among educational management organizations that manage charter schools (Bulkley, 2005), or the financial backing found with such foundation efforts as the Merck Institute for Science Education's reform effort (Corcoran, 2003). Instead, providers' reform work was financed by district budgets or school-initiated grants.

Our interim findings point to two underlying forces that influence how providers survive in this market-oriented environment. First, providers, such as those in this study, do not have the guaranteed streams of income found in a public organization. To sustain themselves, the providers need schools and districts willing to pay for their services directly or via grants programs. Second, a reform's enactment depends heavily on the financial decisions of the host school and district. When schools rely on grants to support reform work, there is a tendency to shift gears to meet the terms of the next grant. This can interfere with the work of the provider. Schools faced with resource constraints also make difficult decisions regarding how much support to purchase from the provider. When providers offer technical assistance at an additional cost the decision regarding the essential need of this support is left to the school and/or district. This interplay of market and power can result in pressure to negotiate many of the key principles of their designs once implementation is underway in a particular school or district.

Schools and districts have different needs and some approaches may work better than others. While the five providers' theories of action vary, and do not equally emphasize particular elements, the Coburn (2003) framework may help district policymakers and school leaders who want a well-integrated approach to high school reform. This framework offers a template to consider what aspects of improvement and scale providers can and cannot offer, and what school or district staff will need to fill in.

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