National Evaluation of Writing Project Professional Development:
Year 1 Report

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Contents

Acknowledgments

Executive Summary

The National Writing Project (NWP) is a nationwide network that provides professional development to teachers across all disciplines in elementary, secondary, and higher education. Its model for professional development puts teachers at the center, as co-designers and implementers of reforms. Its activities include invitational summer institutes, continuity programs for graduates of those institutes, and partnerships formed between local NWP sites and schools to conduct ongoing professional development. In late 2006, the NWP selected SRI International (SRI) as its external evaluation contractor for a 5-year study of the impact of its partnership activities with schools on writing instruction and writing performance. This report describes the design of that study, the sample selected for the study, and procedures for the data collection that is now under way.

The study uses a random assignment design, in which researchers have assigned *schools* to one of two conditions: a partnership condition (the treatment group) or a delayed partnership condition (the control group). NWP local sites will plan a sustained program of professional development designed to reach between 35 and 100 percent of teachers in partnership schools over the course of the 4 years of data collection in the study. The local NWP sites will receive $12,000 per year for each of their partnership schools in the study as incentives for partnership development. Delayed partnership schools have agreed to refrain from any substantial professional development related to writing for the duration of the study; at the end of the study, their local NWP site will form a partnership with them. During the study, each delayed partnership school will receive an $8,000 per year incentive.

The sample for the study comprises 41 schools from 15 local NWP sites in 3 U.S. regions—the Northeast, Midwest/South, and West. The schools in the study are comparable with respect to their size, demographics, and student achievement levels. The sites represent different regions across the United States and reflect the diversity of sites in the NWP network with respect to experience and capacity. The study focuses on teachers and students in seventh and eighth grades, but partnership activities may encompass all grade levels within the schools included as part of the sample.

The study is employing multiple methods to study the effect of partnership activities on teaching and learning. Student writing performance in English/language arts (ELA) classrooms will be measured using writing prompts, naturally occurring student work (i.e., developed as part of their regular coursework), and available school records. Teacher instruction will be measured by gathering naturally occurring teacher assignments, instructional logs, an annual survey of all certified staff, interviews, and observations. In fall 2007 SRI began collecting baseline data, a process which will continue throughout the 2007-08 school year. This first year of data collection also serves as the year in which local NWP sites plan professional development with their partnership schools.

SRI's analysis plan calls for both qualitative and quantitative analyses of the data. The qualitative analyses will provide the in-depth descriptions necessary to understand professional development activities and how they vary among partnership and delayed

partnership schools. These analyses will also describe how partnership work is intended to influence teacher and student outcomes. The quantitative analyses will address the impacts that partnership work has on teaching and learning and how those impacts are related to the nature and intensity of the professional development that teachers encounter. The quantitative analyses will also document how the NWP affects the teacher community.

Chapter 1 Context for the Evaluation

The National Writing Project (NWP) is a nationwide network that provides professional development to teachers across all disciplines in elementary, secondary, and higher education. Its mission is to improve student achievement by improving writing instruction and student writing performance in schools. Founded in 1974 and supported with funding from the U.S. Department of Education, foundations, corporations, universities, and K-12 schools and districts, the NWP serves more than 100,000 teachers through a network of nearly 200 university-based sites. These local NWP sites match funds from the NWP national office with local resources to provide invitational summer institutes to develop teacher leaders and to offer customized professional development to participating teachers and schools. In all these activities, the local NWP sites adhere to a core set of principles that emphasize that teachers are agents of reform and that reform happens when teachers are supported in developing and sharing expertise with their colleagues.

In late 2006, the NWP selected SRI International (SRI) as its external evaluation contractor for a study of the impacts of its sites' partnership activities with schools on writing instruction and writing performance. The evaluation, which is relying on a random assignment design, includes a multimethod approach designed to provide a detailed analysis of partnership and delayed partnership implementation, fidelity to condition, the context of the implementation, and outcomes for schools, teachers, and students. The sample for the study comprises 41 schools from 15 local NWP sites in 3 U.S. regions—the Northeast, Midwest/South, and West. The evaluation includes annual data collection activities covering similar topics and using most of the same instruments in both partnership and delayed partnership schools. The data collection activities include case studies with visits and phone calls to sites, schools, and districts; student writing prompts; teacher logs of daily classroom practice; teacher assignments consisting of naturally occurring work; naturally occurring student work linked to the teacher assignments; and an annual survey of all certified staff. Baseline data collection has begun with the 2007-08 school year, and during 2007-08, local NWP sites will engage in planning partnerships with half the schools in the study so that SRI can put baseline measures for students, teachers, and schools in place before the partnership work begins.

Past Research on NWP Activities

A variety of past studies have examined the full range of NWP activities. Some studies have focused on the invitational summer institutes and their effects (Brachter and Stroble 1994; Pritchard 1987). Other studies have focused on the customized, school-based professional development offered to teachers through partnership activity (Stokes 2003). Still other studies have examined how a broad range of NWP-related activities affects teachers and students (Buchanan et al. 2005).

The research that has been conducted thus far has provided valuable insights into the distinctive features of the NWP model and documented effects on teaching and learning. Descriptive case studies, for example, have pointed out that one of the distinctive features of the NWP approach is its reliance on teacher expertise and on teacher networks (e.g., Lieberman and Miller 1990; Lieberman and Miller 1999; Lieberman and Wood 2001,

2003). Single-group designs have documented gains in students' ability to use conventions in writing and in their rhetorical effectiveness (Fancsali and Silverstein 2002). More recently, comparison group studies have documented positive effects on writing instruction and on writing performance (Buchanan et al. 2005; Olson and Land 2007).

Some limitations of past research could be overcome with more rigorous research designs. For example, the use of random assignments could reduce the risk of the self-selection bias associated with comparison groups in which teachers self-select NWP activities (Shadish, Cook, and Campbell 2002). In addition, researchers could attempt to minimize the variability in professional development designs and local school contexts to make it easier for implementing rigorous research on NWP activities consistently across different NWP sites (see Buchanan et al. 2005 for an explication of difficulties related to variability across sites).

The Current Evaluation: A Focus on Partnerships

The request for proposals (RFP) called for a 5-year study to evaluate the effectiveness of NWP partnership work on improving teacher practice and student outcomes. The RFP requested that the proposal include two designs—an experimental design and a quasi-experimental design—in case insurmountable challenges were encountered in recruiting schools for a randomized trial. The RFP also specified that the first year be dedicated to refining the research design; during that period, the contractor would collaborate with the NWP to identify the most feasible and rigorous design.

The focus on partnerships in the current evaluation is significant, because "the work" of the NWP consists both of connecting teachers to colleagues outside their school who are resources for ongoing learning and of creating vibrant professional communities within schools (Lieberman 2000; Lieberman and Wood 2003). Partnerships formed between local NWP sites and individual schools seek to cultivate professional communities focused on writing that are tailored to the needs of those schools and that draw on the expertise of teachers in the school and that of teacher consultants (TCs) associated with the local NWP site. Research has shown that developing professional communities within schools can facilitate the sharing of expertise; promote deeper, critical reflection on practice; and positively affect both teaching and learning (Lee and Smith 1996; Little 2002).

Research on partnerships is also important because the findings can help fill gaps in our knowledge of effective interventions in writing. Research syntheses focused on identifying effective writing practices have identified a number of strategies that individual teachers can employ to improve the writing performance of students in their classes (Graham and Perin 2007b). At the same time, validation is needed that the widely held hypothesis that a coordinated, well-designed writing program that involves all pertinent teachers can positively affect teaching and learning (Graham and Perin 2007a).

4

Chapter 2 The Conceptual Framework
Guiding the Evaluation

As with many educational reforms, the NWP's primary goal is improving students' learning—in this case, the ability to communicate effectively through writing and to use writing as a tool for thinking. And as is the case with many reforms, the key strategy for increasing student learning is changing what takes place in the classroom between teacher and student and among students. What is unique about the NWP, however, lies in the strength of the combination of approaches it uses to bring about deep changes in teachers' understanding and practice. The NWP model is hypothesized to support teachers by allowing them to take the kinds of risks that help improve their teaching by:

- becoming part of a culture in which they are active learners rather than passive recipients of expert knowledge;

- sharing their knowledge and experiences with colleagues and, by so doing, coming to see themselves as a central source of the knowledge needed to improve practice;

- overcoming isolation and building community through collegial critiques of their work;

- learning about how writing is learned by writing themselves;

- understanding professional development as an ongoing process of goal development, practice, individual and collective reflection, and then explicit revision; and

- systematically examining research as well as practice within a professional learning community.[1]

In short, ***teachers are at the center*** (Gray 2000). They are both the codesigners and the implementers of reform. They bring their own expertise to bear, and they participate in a research-informed community of practice. They actively draw on empirical writing research—from the pioneering work of Janet Emig (1971) to the latest cognitive theories of writing (Hayes 2006), writing strategies (Graham 2006), and writing processes (Pritchard and Honeycutt 2006)—as well as on research undertaken by members of their own community.

Although the NWP does not promote a single "right" approach to the teaching of writing, NWP core principles acknowledge that some practices are more effective than others (McDonald, Buchanan, and Sterling 2004).[2] Its theory of change includes a broad set of expectations regarding what teachers should do in classrooms: establish high expectations for students; explicitly teach and model writing as an active knowledge-building process; provide challenging, relevant writing assignments; lead and engage students to reflect and

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[1] This list synthesizes descriptions of the NWP found in Lieberman and Wood (2002) and Stokes (2005).

[2] The NWP perspective on classroom instruction is consistent with a number of theoretical and empirical traditions in education: situated cognition (Lave and Wenger 1991), sociocultural theory (Rogoff 1990; Tharp and Gallimore 1988), and reciprocal teaching (Palincsar and Brown 1984).

use feedback to revise their writing; and encourage students to develop competence in diverse writing tasks and genres across the curriculum.

Figure 1 graphically portrays these general features of the NWP theory of change, the theory that serves as the framework for the evaluation. It shows that the ultimate goal is improved student outcomes, which result from improvements in teachers' practices, knowledge, and attitudes. Teacher learning results from interaction with peers and others in the professional community at the school, supported and structured through the NWP, which itself exists in the "third space" between the university and the school district.

Figure 1. Evaluation framework
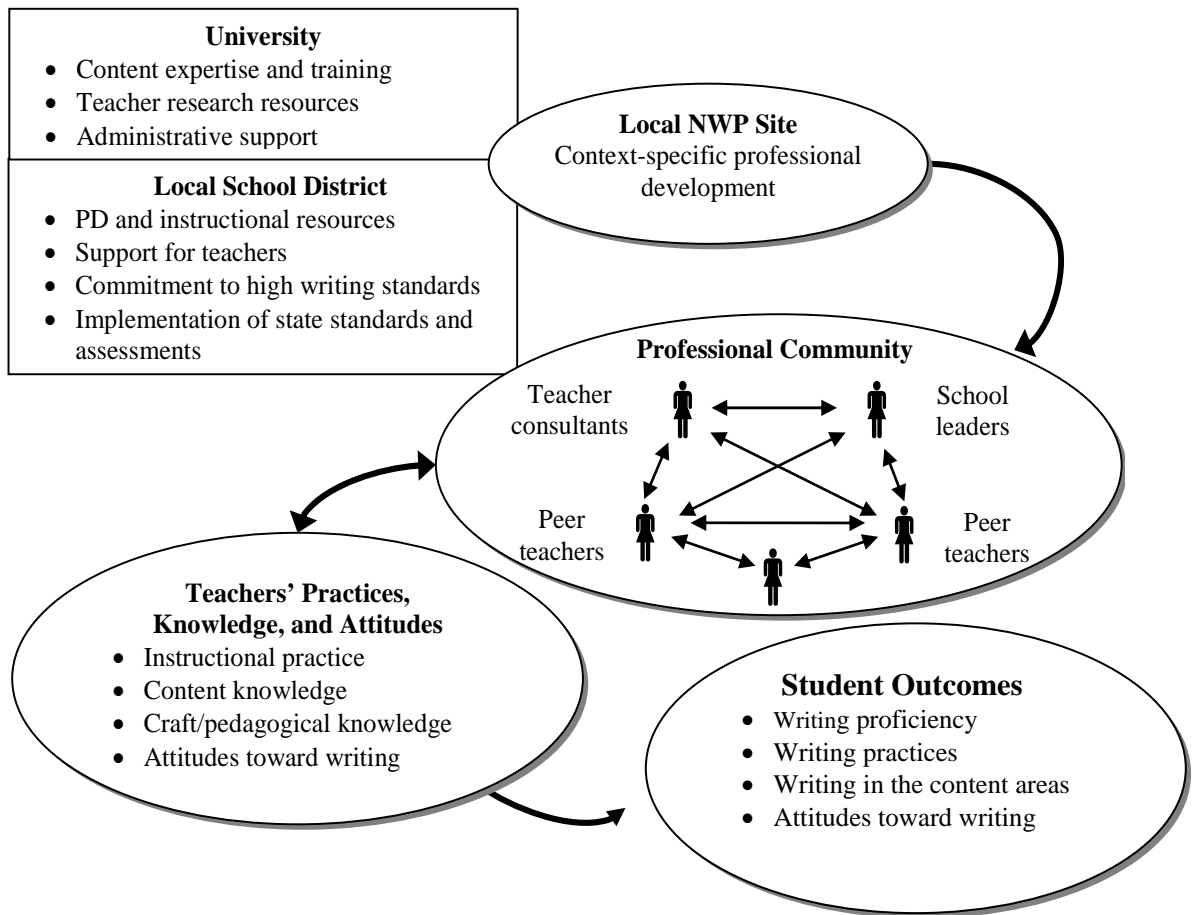
Chapter 3 Design for the Evaluation

In this chapter, we review the research questions generated from the conceptual framework, our sampling methods and the resulting sample, and the measures to be used in the study. We describe data collection methods in a subsequent chapter, including procedures for preparing teachers to support data collection.

Research Questions

The research questions guiding the evaluation are:

1. Does the **writing performance** of students in classes taught by teachers in NWP partnerships improve to a greater extent than does that of students in a comparison group taught by teachers without NWP training?
2. Do **other student outcomes** related to writing performance (e.g., attitudes toward writing, use of best practices and strategies for writing, amount of independent writing done) in classes taught by teachers in NWP partnerships improve to a greater extent than do those of student outcomes in a comparison group taught by teachers without NWP training?
3. Do any effects observed in Questions 1 and 2 above **increase with time of involvement for teachers** (e.g., as teachers' exposure to NWP participation increases)?
4. Do any effects observed in Questions 1 and 2 above **increase over time for students** as they experience repeated exposure to teachers with NWP participation?
5. How are **mediating factors** (e.g., teacher knowledge, skill, dispositions, and instructional behaviors) affected by participation in NWP partnership activity?
6. How do **changes in mediating factors** identified pursuant to Question 5 above **relate to observed changes in student performance**?
7. What are the **essential dimensions of the professional development** offered through NWP school partnerships, and which of them contribute significantly to teacher change and student learning?
8. How does NWP **participation impact teachers' professional community** and, in turn, **impact teacher and student outcomes**?

Evaluation Timeline

The first year of the 5-year evaluation focused on refining the evaluation design, developing and testing the data collection instruments, and recruiting sites and schools. Years 2 through 5 will focus on data collection and analysis. The timeline for major project activities is presenting in table 1 below.

Table 1. Timeline for the study

Calendar Year	Study Year	Description of Major Study Activities
2006-07	1	- refine study design - develop and pilot data collection instruments - identify, recruit, and select sample of sites and schools
2007-08	2	- random assignment of schools to either partnership or delayed partnership groups - prepare teachers to collect data - baseline data collection at sites, schools, and districts - local NWP sites begin planning the professional development with the school assigned to the partnership condition - analysis of qualitative and quantitative data
2008-09	3	- ongoing data collection at both partnership and delayed partnership schools - local NWP sites begin providing professional development to partnership schools in summer 2008 - analysis of qualitative and quantitative data
2009-10	4	- ongoing data collection at both partnership and delayed partnership schools - ongoing professional development at partnership schools - analysis of qualitative and quantitative data
2010-11	5	- ongoing data collection at both partnership and delayed partnership schools - ongoing professional development at partnership schools - local NWP sites can begin forming a partnership with delayed partnership schools in summer 2011 - analysis of qualitative and quantitative data - final report

Overall Design and Description of the Conditions

This study uses a random assignment design. In the evaluation, schools have been randomly assigned to one of two conditions, a partnership condition (the treatment group) or a delayed partnership condition (the control group). Schools are the level of random assignment, because partnerships are formed at the level of the school and are intended to affect the school as a whole.

Partnership Condition

This evaluation focuses on NWP partnerships—agreements between local NWP sites and schools to spend 1 year planning a partnership and at least 3 years working together to improve the writing outcomes for all students in a school. In general, partnerships include school-based in-service offerings, in-school and in-classroom coaching, and structured and unstructured opportunities for teachers to work with peers in professional learning

communities. For some teachers in each partnership, participation may also include more intensive activities such as attending a summer institute. The schools assigned to the partnership condition will have the opportunity to determine the focus and nature of their professional development to meet their particular needs, just as would schools in a partnership that might form outside this study.

The partnership condition for this study differs in some ways from typical partnership formation patterns. For example, for this study, we have set a minimum threshold for teacher professional development contact hours of 30, but from partnership to partnership and site to site, the actual number of teacher contact hours will vary widely. In addition, we expect a significant proportion of each school faculty to be involved in partnership activities; in naturally occurring partnerships, on the other hand, sometimes only a small subset of teachers participates. These minimum thresholds will ensure some comparability across sites and reduce the chance that a high level of variability across sites would make it too difficult to analyze the effects of the NWP partnership approach.

Delayed Partnership Condition

One way to increase participation in a random assignment study is to provide participants who are assigned to the control group with the intervention at the end of the study. This evaluation study uses this "delayed treatment" design. Schools assigned to the delayed partnership condition have been asked to refrain from participating in any "extra" school-wide professional development related to writing for 4 years starting with the 2007-08 school year. Teachers in those schools have also been asked to refrain from engaging in optional professional development in writing. Teachers may participate in any writing-related professional development their district or state requires of them, because teachers in partnership schools are likely to be subject to similar requirements and because opting out of mandated professional development may be difficult or impossible.

Necessary Sample Size: Power Analysis

To conduct the randomized trial, SRI's power calculations indicated the need to recruit and retain 30 schools to detect an effect size of +0.30 or greater, which is a moderate effect size for an educational intervention.[3] We know from experience, however, that sometimes even the most dedicated schools lose key leaders, change direction, or choose to leave research studies, especially over the course of a 4-year study. Thus, we decided to oversample schools for the study so that after accounting for attrition we will have sufficient power to detect this modest effect size.

Sampling Procedure

By design, NWP partnerships are structured to address the particular needs of individual teachers and the school context (Stokes 2003). Furthermore, NWP sites vary with respect

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[3] Power calculations for comparison of first-year growth in participant schools with fall and spring writing assignments were based on four teachers per school and eight students per teacher. The effect of covariates (in particular the pretest) was considered in these power calculations (see page B-1 and B-2 of SRI's proposal for more details). The sample sizes for teachers and students vary for other power calculations, but in all cases are adequate for the evaluation and take the effects of covariates into consideration. To plan for attrition and ensure sufficient power, we have increased the number of assignments per teacher to 10 students from eight.

to their capacity to provide sustained professional development through partnership work and with respect to their approaches to develop and support partnerships with schools. A challenge for any evaluation study seeking to analyze the impact of NWP partnership activity, then, is to define a sampling frame of partnerships that:

- increases external validity by reflecting the principles of the NWP with respect to adapting partnerships to local needs, and reflects a diversity of sites;
- represents, as best as possible, the diversity of sites with respect to local context and sites' resources for supporting partnership work; and
- includes partnerships that share some essential features that the NWP deems necessary to provide an intervention with the potential to impact writing instruction and achievement.

Defining those essential features of partnerships in a way that was consistent with NWP principles but that did not exclude sites with fewer resources was an important early task of the evaluation. To define these features, the SRI team relied both on a report the NWP commissioned to define partnerships for the NWP evaluation (Bickel and Iriti 2006) and on input from NWP national office and local site staff provided in a series of teleconferences in early 2007. The resulting definition included four essential features, reflected in Figure 2: shared goals, shared commitment, a critical mass, and sufficient exposure to professional development.

Figure 2. Essential features of NWP partnerships

Shared goals (co-designed)
Although specific goals and strategies may change over the course of the partnership, both the local site and the school must share an understanding of goals and strategies each year. One of the explicit or implicit goals of the partnership must be to benefit ALL students by improving the instructional practices and climate at the partnership school and related goals and strategies.

Shared, long-term commitment to achieving the goals (co-resourced)
There should be evidence over multiple years of a district and/or school leaders' commitment (as well as time dedicated) to the partnership.

A critical mass of teachers in the school participating in NWP programming
Regardless of how teachers are selected into a partnership, a critical mass (35-100%) of teachers in a school must participate. The strategies for recruiting teachers to participate in NWP programming may include (but are not limited to) recruiting volunteers or targeting specific groups of teachers (e.g., grade level or department).

Participating teachers receiving sufficient professional development
As a rule of thumb the critical mass of participating teachers (defined above) should receive at least 30 contact hours of professional development (deliverable by Local Writing Project staff and/or local Teacher Consultants) each year.

Eligibility Criteria for Sites

To ensure that NWP sites of interest but with fewer resources for supporting partnerships would not be excluded from the sampling frame, the eligibility requirements for sites were few. The evaluation team did expect local NWP sites to be able to demonstrate a basic capacity to form partnerships, identify schools to take part in the study, and secure

their commitment. The NWP and SRI believed that involving local sites in recruiting would greatly facilitate recruitment to the study and enhance potential buy-in from participating schools. The specific criteria for including NWP sites in the study were their:

- ability to recruit pairs of schools with similar profiles that agreed to form a partnership (either as part of the partnership or delayed partnership condition), to be randomly assigned to a condition, and to participate in the research, regardless of their assigned condition;
- commitment to supporting (including co-resourcing) a long-term partnership with the schools recruited for the study and confirming the school's ability to commit to such a partnership; and
- readiness to start partnership planning during the 2007-08 school year and begin professional development activities starting in 2008-09.

Eligibility Criteria for Schools

NWP sites form partnerships with schools that serve different grade levels and with schools that have individual teachers who are or may have been active in the NWP. Our experimental evaluation design required us to focus on a narrower range of grade levels to achieve sufficient power, given available resources. In addition, the presence in a school of teachers familiar with the NWP model and its practices would pose the potential for contamination of study results. Therefore, we established the following criteria for school eligibility:

- Schools must serve seventh- and eighth-grade students.
- Schools must have had little (preferably no) experience with NWP.
- Schools must be willing to commit to participate in data collection for 4 school years (2007-2008 through 2010-2011).
- Schools have to accept a 50-50 chance of being randomly assigned to begin 3 years of partnership activities, starting in 2008-2009, or to refrain from working with the NWP until the conclusion of the 2010-11 school year.
- Schools asked to refrain from participating in an NWP partnership will still receive incentives that they can use to support school activities outside of the teaching of writing.

In conversations with local NWP sites, we discovered that, because some sites had worked intensively with individual teachers and schools over the course of many years, it would be difficult for those sites to identify schools where no teachers had experience with the NWP. We therefore identified a threshold for defining "little experience with NWP"; it included schools where individual teachers with NWP experience were too few and not positioned well enough to influence their colleagues' writing practices. We decided to include schools in the sample with "little" experience if they:

- had not received 30 or more hours of professional development over the past 2 years;
- had no teacher who had participated in a summer institute in the past 5 years;
- had no more than two TCs from the local NWP site in the school; those TCs could not be in a position to influence the attitudes or practices of colleagues in their

schools (e.g., serving as a writing coach in the school, delivering site-based professional development in faculty meetings); and

- had no leader (principal, assistant principal, department chair, or other faculty member in a leadership position) who had been a TC in the past 5 years.

We verified eligibility of schools in two ways. First, schools completed the commitment form provided to sites and schools as part of the recruiting process. Second, we conducted a telephone screening with site directors and schools to confirm their eligibility, given the criteria above. Third, we conducted on-site interviews with site staff, school officials, and teachers in fall 2007 to verify eligibility. The second and third steps proved critical, given that we identified seven schools originally selected for the study that did not meet the eligibility criteria. In addition, three schools withdrew from the study. Schools that did not participate in the study were replaced by other schools at the NWP site, by schools nominated by another NWP site in the same state, or by schools nominated by another NWP site in the same region if neither of the more preferable replacement options existed.

Inclusion Criteria for Classrooms

Ideally, in an evaluation study such as this one, data on classroom instruction and student writing are collected from all classes taught by participating teachers. Including all classes eliminates the bias associated with not having students randomly assigned to classrooms; it also permits longitudinal analysis focused on student gains over time. However, in a study with 41 schools and some 186 ELA teachers, the number of artifacts of instruction and student writing that would need to be collected, processed, and scored would exceed 100,000 per year, well beyond the capacity of the current evaluation resources. Therefore, we chose to select one class for each teacher in the study for inclusion in the study.

Because partnerships may focus on a subset of teachers in the school (e.g., teachers interested in improving their writing instruction, social studies and science teachers, sixth- through eighth-grade ELA teachers), it was not immediately apparent that seventh- and eighth-grade ELA teachers were the most appropriate sample. The decision to focus this subset of data collection activities on seventh- and eighth-grade ELA teachers was based on balancing three factors: the necessity of sampling comparable teachers across schools, the resources available for the study, and the assumption that for a partnership to truly succeed it must ultimately (and minimally) affect the instructional practices of language arts teachers.

To reduce bias, we selected classes for teachers at random, using a random-number generator keyed to the number of periods in a day. All seventh- and eighth-grade classes in which ELA instruction took place were eligible, with four exceptions: (1) self-contained classrooms exclusively serving special needs students who are exempt from state testing, (2) classrooms that included 30 percent or more special needs students, (3) classes with 50 percent or more English language learners (ELL) who complete their mandated state testing in their native language, and (4) classes that included students who were not in seventh or eighth grade. The primary reason for excluding classes with a high percentage of special needs students is the difficulty in interpreting results, given the wide range of accommodations likely to be required when students respond to writing

prompts and reflections. We did not include classes with a high percentage of students who could not write in English because a class with a majority of students would be unable to complete our writing prompts and would therefore complicate our data analysis. We did not want to exclude classes with a high percentage of ELLs who are capable of being tested in English because some partnerships may focus on strategies for teaching writing to English learners.

Strategies for Securing Participation and Reducing Attrition

As an incentive for sites to form partnerships, the NWP decided to offer financial incentives for study participation. All schools selected for the evaluation were guaranteed to receive resources from the NWP, which varied in regard to the experimental condition to which each school was randomly assigned:

- Schools randomly assigned to the comparison condition will receive $8,000 per year for each year of the evaluation, on verification that they have refrained from participating in professional development in writing (beyond what state or district policies required). These funds can be spent for any legitimate educational purpose aside from the improvement of writing instruction. Additionally, at the conclusion of the study, comparison schools will become eligible for a subsidy to pursue a partnership with their local NWP site.

- NWP sites will receive $12,000 per year for each school assigned to form a partnership with the site. These funds are intended to be used exclusively to subsidize partnership work, but not to be the sole source of resources for the partnership. Schools are required to provide additional financial and/or in-kind contributions as is the case in partnerships outside of the study. During 2007-08, these funds are to support partnership planning; implementation of the partnerships will begin in the summer of 2008. Given that NWP estimates each partnership costs an average of $30,000 per school, the incentive level was set intentionally low to necessitate co-resourcing of partnership activity.

Because data collection imposes an additional responsibility on individual teachers above and beyond potential participation in NWP-related professional development activities, the NWP also plans to provide each participating teacher in the study with an incentive of $400 annually for the duration of the study. The gift of $400 is presented to teachers at the end of the school year and is an incentive for participation in data collection, not intended as a form of compensation for collecting data.

Procedure for Random Selection of Sites and Random Assignment of Schools

Thirty-two local NWP sites obtained formal commitments from 98 schools to participate in the study. To identify NWP sites for inclusion in the sample, SRI sorted the sites into states and the states into three regions; the boundaries of the regions were defined so that each region had a similar number of schools. SRI then selected a stratified random sample of sites within regions and then pairs of schools within sites, rotating from region to region to ensure comparable representation from all geographic regions in its initial sample of 40 schools and then randomly assigned 1 school in each pair to each experimental condition.

Sample Characteristics

This section presents the characteristics of sites included in the final sample and the characteristics of the schools. The description of school characteristics also includes analyses of the comparability of partnership and delayed partnership schools with respect to demographic characteristics and a description of the achievement profiles of schools in the sample.

Characteristics of Sites

The baseline sample consisted of 15 sites, distributed evenly across 3 U.S. regions—the Northeast, Midwest/South, and West. As table 2 below indicates, sites in the sample served more teachers and had more teacher consultants than the NWP average. The sites in the sample also had larger budgets than the average NWP site. At the same time, the average number of hours per participant served was similar for sites in the sample and the NWP average. Importantly, the range among sites in the sample for each of these parameters was neither at the bottom nor top of all NWP sites.

Table 2. Characteristics of sites in the sample

	Range among sites in sample	Range among all NWP sites	Average for sites in sample ($n = 15$)	NWP average ($n = 190$)
Number of Program Participants	2,766-26,678	600-40,682	12,314 (7,615)	9,235 (7,616)
Average Program Hours Per Participant	40-94	18-263	59.5 (14.7)	60.6 (29.2)
Number of TCs in Site-Sponsored Leadership	12-100	0-200	43 (29)	32 (28)
Total Budget	$88,836-$124,766	$39,244-$1,912,467	$198,319 ($124,766)	$168,921 ($185,681)

NOTE: Standard deviations appear in parentheses.

Characteristics of Schools

At baseline, the schools in the partnership and delayed partnership conditions were comparable with respect to size and demographic characteristics. As table 3 shows, the mean school enrollment for the sample overall was 614 students; school faculty size averaged 44 teachers. None of the differences between partnership and delayed partnership schools were statistically significant.

Table 3. Size of schools in the sample

	Partnership schools (*n* = 21)	Delayed partnership schools (*n* = 20)	All schools
Mean total enrollment	669 (368)	561 (262)	617 (321)
Mean faculty size (full time equivalent)	47 (24)	41 (24)	44 (24)
Mean student-teacher ratio	15:1 (3.0)	14:1 (3.2)	15:1 (3.1)
Average number of seventh- and eighth-grade ELA teachers	4.7 (2.7)	4.4 (3.0)	4.5 (2.8)

NOTE: Standard deviations appear in parentheses.

As table 4 indicates, the schools were also comparable with respect to student demographics. The percentage of students who were from low-income families, as measured by the percentage of students in each school eligible for free or reduced-price lunch, was comparable, as was the percentage of White students and students from communities of color.

Table 4. Student demographics of schools in the sample

	Partnership schools (*n* = 21)	Delayed partnership schools (*n* = 20)	All schools
Mean percent eligible for free or reduced-price lunch	44 (25)	53 (25)	49 (25)
Mean percent White	64 (28)	59 (30)	61 (29)
Mean percent Black	24 (25)	28 (30)	26 (27)
Mean percent Hispanic	8.7 (13)	9.5 (14)	9.1 (13)
Mean percent Asian	2.5 (4.9)	2.7 (5.0)	2.6 (4.9)
Mean percent American Indian	0.9 (1.2)	0.7 (1.0)	0.8 (1.1)

NOTE: Standard deviations appear in parentheses.

The schools in the two groups were also comparable with respect to overall achievement levels, as defined by whether schools met Adequate Yearly Progress (AYP) for all of its subgroups (see table 5). Fewer schools in the delayed partnership condition made AYP in 2005-06 than did schools in the partnership condition, but these differences were not

statistically significant. Numbers so far for 2006-07 suggest the sample is evenly balanced between schools meeting and not meeting AYP.

Table 5. Number of schools meeting AYP by condition

	2005-06		2006-07[1]	
	Met AYP	Did not meet AYP	Met AYP	Did not meet AYP
Partnership schools	10	11	6	12
Delayed partnership schools	7	13	7	10

[1] Data are not available for some schools for 2006-07.

Measures

SRI is measuring the impact of the treatment on students, teachers, and teachers' professional communities by assessing:

- students' writing proficiency, use of best writing practices, writing in the content areas, attitudes toward writing, and amount of time spent writing;
- teachers' instructional practices, writing knowledge and skills, and attitudes about writing; and
- teachers' professional communities and the relationships and resources that characterize them.

All of these measures are being assessed in both NWP partnership and control schools so that researchers can appropriately assess which aspects of NWP partnerships are likely to be generating the effects detected for those partnerships.

SRI also is gathering data about the amount of exposure that teachers have to NWP activities, the characteristics of the NWP activities in which teachers participate, the amount and characteristics of other writing-related teacher professional development, and the conditions and resources that support and hinder implementation of NWP practices. Additionally, researchers are gathering data on the amount of exposure that students have to NWP teachers and on student and teacher characteristics.

Annual data collection activities for this multimethod evaluation include case studies with visits and phone calls to sites and schools to interview site directors, teachers, and school and district leaders; writing prompts administered to students twice each year; teacher logs of daily classroom practice; teacher assignments consisting of naturally occurring work; naturally occurring student work linked to the teacher assignments; and an annual survey of all certified staff. These instruments and the constructs they are designed to measure are explained in a subsequent section.

Table 6 shows the various measures and the data sources for each.

Table 6. Data sources for student, teacher, and professional community measures

	On-demand writing prompts	Artifacts of instruction	Teacher surveys and logs	Interviews and focus groups	School/ district/ NWP site records
Student measures					
Writing proficiency	✓	✓			✓
Use of best writing practices		✓	✓	✓	
Writing in the content areas				✓	
Attitudes toward writing				✓	
Time spent writing		✓	✓	✓	
Exposure to teachers who have received professional development					✓
Student background					✓
Teacher measures					
Use of best instructional practices		✓	✓	✓	
Writing knowledge and skills			✓	✓	
Attitudes toward writing			✓	✓	
NWP professional development			✓	✓	✓
Other professional development			✓	✓	
School leadership and context			✓	✓	
Teacher background			✓		✓
Teacher community measures					
Strength of the teacher community			✓	✓	
NWP activities			✓	✓	
School/district practices and policies				✓	

During the first year of the evaluation (2006-07), SRI researchers have developed and pilot-tested instruments and refined rubrics for analyzing artifacts of instruction. To guide instrument development, SRI researchers have worked with the NWP to develop a construct map (see appendix A) to ensure that relevant constructs related to writing instruction and student writing performance could be measured using multiple methods. When possible and appropriate, SRI has drawn on existing scales and rubrics with known

psychometric properties. Piloting of the writing prompts, instructions for gathering teacher assignments and associated work, and teacher surveys and logs has focused primarily on verifying that respondents are interpreting questions as intended. SRI has used cognitive interviews (Desimone and Le Floch 2004) to identify problems in understanding and has adjusted language in surveys and logs accordingly; items with significant problems have been repiloted. SRI has not yet conducted pilot surveys and logs with a sufficient number of teachers to recalculate the reliabilities of these instruments; the reliability of the scales embedded in surveys and logs will be calculated on baseline data before conducting any analysis using these scales.

We turn now to a description of the measures, and instruments used to assess those measures, of the impact of the partnership on students, teachers, and teachers' professional communities.

Student Writing Performance

The design relies on two direct measures of student writing proficiency to be administered in the ELA classrooms: (1) student responses to writing prompts, and (2) writing that is a response to a naturally occurring teacher assignment. The design also calls for an analysis of extant data regarding writing proficiency for participating students. The availability of extant data is likely to vary considerably from state to state, however.

Writing Prompts. Writing prompts are a widely used method for direct writing assessments; they are intended to "set the stage" for student writing. Ideally, prompts provide students with information about the topic, the purpose for writing, the audience, and the form of writing they are to produce (Calfee and Miller 2007). SRI has selected four pairs of prompts from the NWP library of writing prompts to measure student writing performance. Each pair of prompts is of comparable length (50–80 words) and has the same target audience and form, but differs by topic and specific purpose. Teachers will administer two NWP writing prompts supplied by SRI to students in each target classroom at the beginning and end of each data collection year. SRI is counterbalancing prompts in classrooms because past research has found that the structure, wording, and presentation of prompts can affect results for particular students, but that those effects cannot easily be predicted ahead of time (Huot 1990; Quellmalz, Capell, and Chou 1982).

In scoring writing prompts, SRI will capitalize on recent NWP work to develop reliable analytic rubrics and scoring methods for applying those rubrics (Buchanan et al. 2006). NWP experts will apply those rubrics to score students' responses to writing prompts in regard to six dimensions: content, structure, stance, sentence fluency, diction, and conventions.

In addition, SRI has prepared a form that asks students to reflect on their response to the writing prompt. Students are to complete the self-reflection form within 3 days of writing their response to the prompt. SRI researchers will examine these forms to determine whether or not students have considered the quality of their work and, if so, are able to imagine revisions that would improve their writing.

Artifacts of Instruction: Student Work Linked to Teacher Assignments. The second measure of student writing relies on in-class writing assignments. Capturing data on naturally occurring student writing broadens the measurement of students' writing skills by indicating the extent to which students use best writing practices in their work. SRI will score the students' gathered written work using methods and rubrics that have been employed in the Chicago Public Schools (Sisserson et al. 2002), in an earlier NWP evaluation (Fancsali and Silverstein 2002), and in SRI's evaluation of schools supported by the Gates Foundation (Mitchell et al. 2004).

SRI will examine student work using several criteria on the construct map for the evaluation (see appendix A). For example, SRI will look for evidence in the work of:

- support for and elaboration of claims or thematic points;
- interpretation, analysis, synthesis, or evaluation of ideas in writing (for expository work);
- skill in creating a thematic point (for imaginative work); and
- substantive revisions to writing.

SRI will also apply the six-point holistic rubric the NWP has developed to score naturally occurring student work and may use the samples of student work collected to analyze the nature and extent of teacher feedback on student writing.

School Records. For schools in which students take district or state tests in writing, SRI will collect data on relevant writing test scores. These scores are unlikely to be comparable across schools from different districts and states; however, such scores are another indicator of writing performance that can help us interpret results from the writing prompts and naturally occurring student work. In addition, writing test scores may influence schools' decisions about writing-related professional development.

Other Student Outcomes. In addition to effects on writing in ELA classrooms, the evaluation is examining the effects on students' writing in other classes, students' attitudes toward writing, and the amount of time students spend writing in school, as part of homework, and for enjoyment. These data may be collected through student focus groups in each school.

Student Background Characteristics

Finally, SRI will gather information about students' exposure to teachers who have received NWP professional development; students' background characteristics; and, to the extent that data are available, students' performance on state or district direct writing tests. All these data will come from extant data sets in the partnership states, districts, and schools.

Teacher Practice

The conceptual framework for the evaluation posits that NWP professional development will lead to changes in teacher practice, which in turn will be the primary cause for improvements in student outcomes.

Artifacts of Instruction: Teacher Assignments. The same body of research that is guiding the collection and evaluation of student work has generated robust measures of

teachers' instructional practices. In past evaluations of NWP sites, Chicago schools, and schools working in partnership with the Gates Foundation, teacher assignments have offered telling pictures of the instructional opportunities that teachers provide to their students. Those assignments have supported inferences about differences over time in the intellectual demands and relevance of assignments that teachers make, and about differences between the instructional practices of reforming and conventional schools (Mitchell et al. 2004; Newmann, Bryk, and Nagaoka 2001).

SRI is collecting naturally occurring writing assignments from ELA teachers in the study. The instructions given to teachers call for them to submit assignments that provide the best opportunity to evaluate students' writing skills and abilities for a particular grading period. A cover sheet included with the instruction provides space for teachers to provide information about the context of the assignment: targeted skills, concepts, and content knowledge; verbal instructions provided to students about the assignment; criteria for assessing the quality of student work; and opportunities students have had to engage in various aspects of the writing process.

SRI will analyze naturally occurring teacher assignments using a set of rubrics that build on past research and that align with the construct map for the evaluation. In the same way that we will refine student work rubrics, we will bring the assignment rubrics into close accord with NWP conceptions of best instructional strategies. We will analyze the degree to which an assignment has clearly set forth learning goals apparent in the written materials the teachers distributes to the students. A writing concepts checklist will allow analysts to identify what specific skills, concepts, and content knowledge are evident from the statement of learning goals. A writing processes checklist will track the writing processes students are called on to engage in as part of an assignment. A rubric for construction of knowledge in expository assignments will analyze the extent to which the assignment calls for student work that moves beyond the reproduction of information to the creation of new knowledge. A parallel rubric created for imaginative assignments will be used to analyze the degree to which the assignment calls for students to develop a thematic point.

Teacher Logs. To paint a more complete picture of teachers' instructional practices, we are gathering instructional logs from teachers. The logs were designed by using methods piloted in SRI's evaluation of the Gates Foundation schools (Mitchell et al. 2005) and are patterned after logs developed by Rowan and his colleagues (Rowan, Camburn, and Correnti 2004). The logs ask teachers to describe their learning goals for students, the purposes for which students engaged in writing, collaboration in writing, the feedback teachers provide to students on their writing, students' use of models to guide their writing, and the amount of time students engage in different aspects of the writing process.

Each log booklet consists of a cover page and five two-page daily logs for recording consecutive days of teaching practice. For each booklet, teachers are asked to identify a student and back-up student (in case of absence) to be the focal student for certain items. Each daily log includes a space for teachers to mark the date, the time of day of the class, and the overall goals for class for that day (whether or not improving writing skills was a goal). All questions relating to writing instruction and student opportunities for writing are posed in relationship to the target student. Instructions call for teachers to record what

that student actually did that day, without respect to the assigned work or to what other students were doing in class.

Annual Survey of Certified Staff. An annual survey of certified staff will be the primary data source for writing instruction for teachers in other areas of the curriculum and a supplementary source of data from ELA teachers. The surveys will ask all faculty members to reflect on their instructional practice for the first class section taught in the week for their primary teaching assignment. For this class, teachers will identify the purposes for having students engage in writing since the start of the school year, the particular writing skills emphasized, and the frequency with which students have engaged in different aspects of the writing process. The wording of these items will be aligned with similar entries in the teacher log to allow for comparison across data sources. In addition, to support interpretation of these data, the surveys will also ask teachers to identify the subject, grade level, number of students, and length of the target class.

Teacher Interviews. As a secondary source of data on instructional practices for teachers in curricular areas outside of ELA, we will use structured interview protocols to provide context for interpreting the survey data. During case study visits to schools, researchers will interview and observe teachers, gathering other information about teachers' writing instruction.

Teacher Knowledge and Attitudes

Teachers' knowledge and attitudes toward writing are likely to influence their writing instruction (Fang 1996) and are thus important to measure in any evaluation study focused on writing professional development. SRI is using the teacher survey to measure teacher knowledge and the case study interviews to measure their knowledge and attitudes.

Annual Survey of Certified Staff. We will use two measures from the survey as sources of data about teacher knowledge of writing and writing instruction. As a proxy for teachers' knowledge of writing, we are using an 11-item scale developed to measure the breadth and frequency of teachers' writing practice. As a proxy for knowledge of writing instruction, we are using a four-item index of the breadth of professional development in writing to which teachers had been exposed since their preservice education but before the beginning of the study.

Teacher Interviews. During case study visits to partnership and delayed partnership schools, SRI researchers will interview teachers about their knowledge of and skills in writing, and about their attitudes toward writing.

Professional Development

Data on professional development will serve as the primary source for the treatment or intervention as it is enacted at each school. As such, these data are important for interpreting the overall impact. The three primary sources of data on teacher exposure to professional development are: NWP artifacts and records, the annual teacher surveys, and case study interviews. These data will be collected at both partnership and delayed partnership schools to measure the difference in teachers' participation in writing professional development and to assess fidelity to condition.

NWP Artifacts and Records. From each local writing project site's annual report SRI will collect data on professional development offerings and attendance by partnership sites. We will develop a template in collaboration with NWP staff for use in reporting partnership activity in participating schools. The template will specify local site reporting requirements regarding the nature of the professional development activities, the focus or content of the activities, reach in terms of participation, duration, and the time span of the activities.

Annual Survey of Certified Staff. The survey includes items regarding teachers' participation in professional development both as participants and as leaders for all writing-related professional development. Teachers will answer questions about the format (e.g., workshops vs. a study group), duration in hours, the writing skills emphasized, and the pedagogical strategies used. Pedagogical strategies include items that capture the extent to which professional development staff used active learning strategies; studies of effective professional development have linked those strategies to changes in teacher knowledge and practice (Garet et al. 2001; Penuel et al. 2007). Another survey item asks teachers to rate how influential their professional development activities have been in determining their instruction practices, relative to other possible influences (e.g., the mandated curriculum, student performance on state tests).

Teacher Interviews. Teacher interview protocols include questions about the characteristics of NWP and other professional writing development in which the teachers have participated, and aids and barriers to teachers' writing instruction and their work with the NWP.

Teacher Background Characteristics

Teacher background characteristics may affect overall study results; moreover, because teachers are not being randomly assigned to a condition, it is critical to collect data on their characteristics for potential inclusion in models of the NWP's impact.

Annual Survey of Certified Staff. The surveys include items about the number of years of teachers' overall experience, in their school, and with their current grade level assignment. The survey will also gather information about teachers' gender and highest academic degree attained.

Teacher Interviews. Teacher interview protocols include questions about teacher experience that parallel questions on the survey.

Teacher Professional Community

A signature aspect of the NWP is its emphasis on building teacher professional community as a means to improve writing instruction and develop teacher leadership (Lieberman 2000, 2007). We are building on an approach used in other SRI research to characterize the relationships and resources that define teachers' professional communities (Penuel, Frank, and Krause 2006; Penuel et al. in press). This approach combines survey and site visit data to explain the dynamics of teacher professional communities, including how professional development activities influence those dynamics.

Annual Survey of Certified Staff. The surveys include items in which faculty members are asked to identify their closest professional colleagues and others who have provided

them with help in the past year regarding writing instruction. For this purpose, respondents will be provided with a roster that includes not only all faculty members in their school but also all known providers of writing professional development to the school. These data will be used to construct a picture of the network through which knowledge and resources about writing flows within and to the school (Penuel, Frank, and Krause 2007).

In addition to questions about faculty networks, data on the teacher community will be gathered using survey questions that ask faculty members to indicate how frequently they engage in discussions about writing as part of formal grade-level or cross-grade meetings with colleagues.

Teacher Interviews. As part of the case study visits to schools, researchers will ask teachers several questions about their formal and informal opportunities to collaborate with others, the collegial environment of the school, and barriers to teacher professional community.

School District and State Practices and Policies

SRI will use interviews conducted during case study visits to schools and districts as the primary source of data about school district and state practices and policies, particularly in regard to writing professional development, writing in the ELA curriculum, and assessment of student writing proficiency.

Chapter 4 Data Collection Procedures

Once schools had been identified and assigned to condition, SRI began visiting all participating local writing project sites and schools in early October 2007. Those visits served to collect basic background information on the sites and schools, and to orient schools and teachers to the data collection requirements of the study. By the end of November 2007, SRI had visited all the schools associated with the 15 NWP sites—all the sites participating in the study.

SRI has devised a system that combines local and SRI staff support for the data collection. Each local NWP site has designated a Local Site Liaison (LSC) to provide follow-up support to teachers who are having difficulties submitting data on time. The LSCs devote 6 hours per week to research support and do not lead partnership-related professional development activities at any of the schools they support. In turn, the LSCs receive support from SRI and the NWP in the form of a $3,000 per year stipend, monthly teleconferences with other LSCs, and a weekly call with an SRI liaison. Each of the three SRI liaisons is responsible for follow up with four to five sites. The SRI liaisons monitor incoming data logged by SRI staff to identify any data that are late. As part of their weekly calls with LSCs, SRI liaisons discuss strategies for following up with teachers. Table 7 below summarizes data collection activities. Appendix B outlines the responsibilities of the LSCs and the SRI liaisons.

Writing Prompts

Students in classes will complete on-demand writing prompts at two points in the school year. ELA teachers administered the first prompt to students in their target classes in November 2007. They will administer the follow-up spring prompt in April 2008 on a schedule coordinated on a district-by-district basis so as not to interfere with state testing. Teachers in the same partnership-delayed partnership school pair will administer prompts during the same assessment window.

Artifacts of Instruction: Teacher Assignment and Student Work

Researchers are soliciting four assignments over the course of each school year that teachers in the target classes believe represent students' best opportunity to demonstrate their writing skills. Teachers will submit these assignments to SRI at the end of each grading period. For two of the assignments, we will collect the resulting student work for 10 randomly selected students, for the other two we will collect only the teachers' assignment. Assignment and student work collections paired in this way speak to the relationships between the cognitive characteristics of the assignments that teachers give and the character and quality of student work that results.

Teacher Logs

SRI is collecting booklets of teacher logs at four points during the school year. Teachers are to complete a single booklet for five consecutive classes they teach, beginning on the Monday that the SRI team assigns them the logs. SRI has randomly assigned all teachers to varying log cycles; all will complete their logs at regular intervals, but will do so in weeks that are different from other teachers in their school and for students at different achievement levels in the school. Over the course of the year, each teacher will complete

a log for a student in the lowest and highest quartile and the middle quartiles. The log cycle's design is intended to mitigate time of year effects (e.g., a week with a holiday, end or beginning of the semester) on the measurement of instruction and to capture any differentiated instruction by achievement level.

Annual Survey of Certified Staff

All certified staff will complete the annual teacher survey in the spring. SRI will ask local NWP site staff to assist in the administration of the survey if they can. To maximize the response rate, SRI will also encourage schools to devote part of a regularly scheduled faculty meeting for survey administration.

Teacher Interviews and Focus Groups

On an annual basis, SRI is conducting visits to sites and schools. At present, the design calls for 2-day visits to all schools. This past fall, SRI site visitors collected data in interviews with NWP staff, school and district leaders, and classroom teachers about the school context, past professional development in writing, and the role of writing in the curriculum. In spring 2008, SRI will conduct telephone interviews with participating sites to collect data on emerging professional development plans. In future years of the study, SRI plans to visit all sites and schools in the spring and may incorporate focus groups to augment individual interviews.[4]

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[4] Advisory board members have suggested longer, more frequent visits to fewer schools. SRI is exploring options for implementing those recommendations.

Table 7. Summary of data collection activities

Data collection	Sample	Periodicity
On-demand writing prompts	All students in the target classes[1]	One prompt each fall and spring
Artifacts of instruction (teacher assignments and student work)	• Assignments from all target classes • Student work from 10 randomly selected students from each target class	• Four assignments annually • Two collections of student work annually
Annual teacher surveys and logs	• Surveys of all teachers • Logs from target classes	• Surveys each spring • Logs for 20 class periods each year, spread throughout the year
Interviews and focus groups	• Interviews with teachers, school and district administrators, and NWP staff/consultants • Focus groups with students	Fall and spring of the first year of data collection (2007-08), and spring every year thereafter
School and district records	All students, when available	Annually, when available

[1] As described in the sampling section of our proposal, we will randomly select one target classroom for each seventh- and eighth-grade ELA teacher.

Chapter 5 Plan for Data Analysis

We discuss the qualitative and quantitative analysis planned for the evaluation below. The specific quantitative models to be tested appeared in an appendix to our proposal.

Qualitative Analyses

Qualitative analyses will provide the in-depth descriptions necessary to understand how partnership work is intended to influence teacher and student outcomes. The qualitative analyses will be structured to help us confirm or challenge competing hypotheses about the quantitative results, illustrate the quantitative findings, and identify other important themes for which the quantitative data may have limitations. For example, if we find no significant differences in outcomes for participating student and teacher versus the control group in the first year of participation, qualitative data may provide evidence that helps explain the finding.

We are capturing the qualitative data using structured debriefing forms keyed to analytic categories, such as NWP and other professional development, the teacher community, the school and district context, and treatment effects. When we analyze these forms, we will first analyze the interview data in each partnership to understand the NWP activities and ensuing changes occurring in each partnership school. We then will look across partnerships to identify common themes or patterns that are more broadly related to the implementation and effectiveness of the NWP. In delayed partnership (comparison) schools, we will analyze the interview data in a similar manner to understand the extent to which important constructs are similar or dissimilar between partnership and delayed partnership schools, and the extent to which delayed partnership schools are indirectly influenced by NWP.

We are following an iterative approach to analyzing the qualitative data. This iterative process began with a review of relevant documents (e.g., information about the NWP partnership, information about school and district contexts) before conducting the first set of case study site and school visits in fall 2007. During the visits, our researchers discussed what they were learning in their interviews with one another and, as necessary, tried to fill in any gaps and examine initial hypotheses while on site. Our visitors also discussed with each other themes that were emerging that may not have been anticipated. Engaging in this analytic process while on-site allowed us to tailor and refine data collection to capture the most important features of local partnerships. In addition it allowed researchers to generate and test hypotheses with respondents while still in the field. Now that these initial visits are completed, our visitors are drafting their site and school visit reports, integrating data across respondents and documents, and refining site- and school-specific analytic themes. At an initial projectwide debriefing meeting, visitor teams discussed emerging themes for each site, compared the salience of those themes across the sites, and charted confirming and disconfirming evidence for each theme. The goal of this ongoing analysis will be to compare, contrast, and synthesize findings, and propositions from single cases to arrive at initial conclusions that apply to all schools or to a subset of schools in the entire study.

Quantitative Analyses

We will use three main types of quantitative analyses. We will use the first type, hierarchical linear modeling (HLM), to estimate the effect of the NWP on partnership schools. In the HLM models, the student outcomes described above will be predicted by whether or not a school is in the partnership group or the control group. For example, we propose to build a model in which a change in student writing performance from fall to spring is predicted by whether or not schools participate in an NWP partnership. To apportion variance appropriately, we will use a three-level HLM model with levels for students, teachers, and schools. To improve the precision of the estimate of impact, we will include covariates for students (e.g., grade level, gender, free/reduced-price lunch status), teachers (e.g., years of experience), and schools (e.g., AYP status, school size) that are expected to correlate with writing skill improvement. Because schools have been randomly assigned to the partnership or control group, if partnership schools perform better than control schools, we will be able to infer that the partnerships are leading to greater student achievement.

We will use the second type of analysis, regression models, to explore the factors that are related to student, teacher, and school outcomes. The structure of these models will vary on the basis of the specific question being addressed. For example, we may want to know if particular features of the professional development in which an ELA teacher participated were related to the teacher's subsequent use of particular instructional practices in writing. In that case, we may employ a two-level model with levels for teachers and schools, and include covariates of prior instructional practices, years of teaching experience, and the characteristics of students in the class. When triangulated with data from the case study data, these models could provide evidence of which aspects of NWP partnership work are likely to lead to changes in teacher practices.

In the third type of analysis, we will use a three-level HLM to examine the effects of the NWP over time. Because the design supports the collection of repeated measures on teachers and students in their classrooms in both treatment and control schools, we will be able to model change or growth in program effects on teacher and student outcomes over the course of the study. These analyses will be conducted with the three-level model with time or study year at level one, classroom variables at level two (including teacher characteristics), and school variables at level three (including whether the school is in the treatment or control condition). We will model growth separately for teacher outcomes (e.g., disposition, instructional practice) and student outcomes (e.g., student work scores, student performance on writing prompts). Because we will not necessarily have repeated measures on outcomes for individual students (students will be sampled each year), student scores will be aggregated to and analyzed at the classroom level. Using the HLM model, we will estimate the rate of change in teacher and classroom outcomes; examine how those growth rates vary with teacher, classroom, and school characteristics; and estimate the difference in rates of change between schools participating in treatment and control schools.

Finally, we will use the social network data on teacher communities to describe how expertise and knowledge regarding the teaching of writing flow within schools and the degree to which this expertise is explicitly facilitated by professional writing development activities. For this purpose, for each school in the study, we will analyze the

factors that shape to whom teachers turn for help in writing instruction. These factors will be analyzed using selection models (Frank and Fahrbach 1999), which measure how strong formal, designed features (e.g., the presence of a TC as a coach) act as influences on teachers relative to emergent (as opposed to designed) features (e.g., informal ties). SRI will aggregate the selection models within partnership and delayed partnership schools to test the relative influence of formal, designed features of professional development associated with the NWP in these two samples.

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Appendix A: Construct Map for the Evaluation

Construct	Measure	Notes
A. Learning goals embedded in writing assignments		
1a. Specific product goals	Teacher assignment	Examines the degree to which an assignment has learning goals that are apparent in the written materials the teacher distributes to the students.
1b. Teaching of writing concepts	Teacher assignment	Consists of a checklist that categorizes the learning goals—the specific skills, concepts, and content knowledge the teacher hopes the students will learn and demonstrate—that are evident in a writing assignment.
2a. Construction of knowledge for **expository assignments**	Teacher assignment	Examines the extent to which tasks call for student work that requires students to construct new knowledge.
2b. Creation of a thematic point in **imaginative assignments**	Teacher assignment	Examines the extent to which an imaginative writing assignment calls on students to produce texts that create a thematic point.
2c. Call for writing processes		Tracks the writing processes students are called on to complete in an assignment.
B. Teacher use of writing strategies in instruction		
1. Analysis and emulation of models of good writing	Teacher log Teacher survey	Examines the extent to which students are exposed to models of writing. Examines the extent to which teachers have asked students to demonstrate combining sentences and summarization.
2. Collaborative writing	Teacher log Teacher survey	Examines the extent to which students are required to collaborate.
3. Time for writing	Teacher log Teacher survey	Examines the extent to which teachers provide time for writing instruction and student writing.
4. Informative feedback	Teacher log Naturally occurring student work (exploratory)	Examines the characteristics of teacher feedback to students about their writing.

C. Student use of writing strategies		
1. Revision of student work	Naturally occurring student work	Examines the nature of student revisions to their writing.
2. Students' reflections about on-demand writing	On-demand writing	Examines the characteristics of student reflections about their on-demand writing.
D. Characteristics of student writing		
1. Content	On-demand writing	Examines the extent to which students establish and maintain a focus; select and integrate ideas related to content; and include evidence, details, reasons, anecdotes, examples, descriptions, and characteristics to support, develop, and/or illustrate the idea.
2. Structure	On-demand writing	Examines the extent to which students establish logical arrangement, coherence, and unity within the elements of the work and throughout the work as a whole.
3. Stance	On-demand writing	Examines the extent to which students communicate a perspective through an appropriate level of formality, elements of style, and tone appropriate for the audience and purpose.
4. Sentence fluency	On-demand writing	Examines the extent to which students craft sentences to serve the intent of writing, in terms of rhetorical purpose, rhythm, and flow.
5. Diction	On-demand writing	Examines the extent to which students create imagery, providing a mental picture, or convey feelings and ideas using precise and appropriate words and expressions.
6. Conventions	On-demand writing	Examines the extent to which students demonstrate age-appropriate control of usage, punctuation, spelling, capitalization, and paragraphing.
7. Holistic scoring rubric for student work	Naturally occurring student work	Provides a measure for assessing the overall quality of the student work.
8. Development of expository and/or imaginative writing	Naturally occurring student work	Examines the extent to which expository and imaginative writing is developed and elaborated.

9a. Construction of knowledge in expository student work	Naturally occurring student work	Examines the extent to which students' expository work shows construction of new knowledge.
9b. Creation of a thematic point in imaginative student work	Naturally occurring student work	Examines the extent to which the student's work on an imaginative writing assignment creates a thematic point.
10. Revision of student work	Naturally occurring student work	Examines the nature of student revisions to their writing.
E. Nature of the treatment received by schools and teachers		
1. Intended professional development and/or technical assistance program—at the school level	Case studies Document review	Describes intended professional development. Intended development can differ from what teachers and schools experience.
2. Nature and extent of professional development in writing	Case studies Survey NWP databases	Describes professional development in writing as experienced by individual teachers.
3. Variations in professional development in writing	Case studies Survey	Describes variations in the nature and extent of professional development in writing between and across the treatment and control schools and within the treatment group. Identifies and examines the sources of variation.
F. School context		
1. Demographics, performance, and staffing	Case studies Extant data	Describes the contextual factors that may affect the intervention at the school, including school performance ranking; Title I eligibility; schoolwide student demographics; student attendance; teacher turnover and numbers of years of experience; and school leader turnover and experience.
2a. Professional community	Case studies Survey—network analysis	Consists of the teachers and administrators at the school. The professional community may affect the implementation of the partnership, and the partnership may affect the professional community. Case studies gather data on other aspects of professional community such as school climate, level of trust among staff, and adequacy of resources. The survey focuses on the social network of the school and how information flows through that network.

2b. Workplace conditions	Case studies Survey—network analysis	Includes the overall climate of the school, including degree of discipline, shared goals and shared responsibility for student success and discipline, and support from school leaders.
2c. Collegiality	Case studies Survey–network analysis	Refers to the nature of teacher interactions in both formal and informal settings and how collegial interactions do or do not support the flow of information, practices, beliefs, etc., that emanate from those interactions (or from professional development) in the control schools
3a. School structures	Case studies Survey	Refers to the time and processes available for teacher collaboration and professional development, the school calendar and schedule, and the effect of the structures on the school's use of instructional time. Leadership structures may follow different models and may affect the school's ability to form partnerships and manage the implementation of professional development and school reform. The school's organizing structure refers to the organization of its teachers into teams (e.g., grade-level teams, departments). Elements of school and district structure may affect school-level autonomies, including the school's ability to partner with external organizations and implement professional development.

3b. School capacity	Case studies Survey	Refers to the school's ability to partner with external organizations and support teachers' change in instructional practice. Elements of a school's capacity include: ● the stability of school staff (teachers and administrators); ● teachers' attitudes, beliefs, and instructional practices about writing and teaching writing; teachers' degree of buy-in to the study including data collection activities and the possibility of participating in professional development in writing; the number of teachers who report interest in NWP and their degree of influence with other teachers; ● teachers' expertise and experience with teaching writing; ● the process for selecting teachers for participation in professional development; ● school leaders' degree of buy-in to the study and professional development in writing; ● other reform efforts under way or beginning at the school; school history with professional development and reform; and ● school resources invested in the partnership or professional development.
3c. Motivation	Case studies Survey	Refers to the staff members' motivation for joining the study and their willingness to accept assignment to the treatment or control condition; includes staff members' motivation and rationale for focusing on writing and working with the NWP, and their willingness to participate in the professional development and data collection activities.

4. Federal, state, and district policy context	Case studies Survey	Includes: • for the district policy, its structures and capacity to support the school's partnership with external organizations and teachers' change in instructional practices. Elements of district capacity include the stability of district leadership; the district's acceptance of the NWP reform initiative; the district's capacity to support the school and the school's partnership with NWP; the degree of the district's involvement in NWP professional development; the nature of the district-adopted curricula and role of writing in those curricula; and the degree of autonomy the district grants the school and teachers in their instructional practices. • for state policy, the role of writing in state ELA standards or other content area standards; the role of writing in state standardized tests; and pressure from the state on the school and district to prepare students for standardized tests. • for federal policy, the accountability systems to which the school and district are subject.
G. Local NWP site context		
1a. Background	Case studies Document review	Refers to how long the NWP site has been in operation, major changes such as a change in university partner or leadership transition, and the milestones achieved.
1b. Organizational structure	Case studies Document review	Refers to how site leadership is organized, the number of staff and TCs (and the time they have available for NWP activities), the site's relationship with the NWP national office, and the site's membership in national NWP networks.
1c. Organizational capacity	Case studies Document review	Refers to the factors that enhance or constrain the site's ability to establish and support the partnerships being studied. Elements of capacity include the staff's and TCs' areas of expertise, their relationships with schools and districts in the study, their experience with establishing long-term partnerships and providing ongoing school-based professional development, and their ability to tap into resources to support the partnership.

2a. Core programs offered	Case studies Document review	Describes the site's typical professional development work, including focus, method of delivery, target of intervention (e.g., teachers, school, district administrators), and intensity.
2b. Typical prior partnerships	Case studies Document review	Describes how the partnerships have been structured and resourced and what services have been involved.
H. Implementation level		
1. Characteristics of the site-school partnership	Case studies Surveys	Includes the extent to which the partnership has been coresourced and codesigned, the percent of teachers engaged, and the intensity of professional development.
2. Characteristics of the control schools	Case studies Surveys	Includes those aspects that affect control schools' eligibility to remain in the study, including the focus of professional development at the school and the number of teachers and administrators who are TCs. Also of interest is any mandated professional development in writing instruction.

Responsibilities of Local Site Liaisons (LSCs) and SRI Liaisons

LSC RESPONSIBILITIES

We anticipate LSC responsibilities will require 5 to 6 hours a week during the data collection weeks (ending at end of school year for summer months).

1. FIRST POINT OF CONTACT FOR TEACHERS

You are the first point of contact for teacher participants in the study who have questions about the research.

As the first point of contact, you can answer questions about the data collection, based on the guidelines provided to teachers about what is required and about how to complete forms. You can provide them with encouragement to follow through with study participation, and help them identify ways to be able to participate even though they are busy and have conflicting demands on their time.

At the same time, as the LSC, you should refer any substantive questions about writing instruction and partnership (professional development) activities to someone at the local NWP site who will be responsible for these activities. In addition, it is important to recognize and communicate with SRI when you believe that your role as a researcher conflicts with your role as a teacher or staff developer. These are conflicts that are natural to feel, and researchers themselves often feel them.

2. PARTICIPATE IN A WEEKLY CALL WITH YOUR SRI LIAISON TO DISCUSS LATE DATA AND CREATE NOTES TO FACILITATE TRACKING DATA.

Each week, the SRI liaison will send you an updated spreadsheet with the names and data returned from each teacher at your site. Using this spreadsheet, you and the SRI liaison will discuss individual incidences of late data, decide how to follow up, and discuss complications or teachers' specific circumstances. You may find it helpful to keep notes of these conversations. The SRI liaison will report back to the study team so that the data collection process is noted and so that we can track/explain late data at the time of analysis.

3. JOIN AND PARTICIPATE IN MONTHLY MEETINGS WITH OTHER LSCs AND SRI RESEARCHERS TO DISCUSS ISSUES WITH THE TEAM.

We want to use the LSC team as a way to build a sense of community at participating sites. The focus of the community's effort is to learn about and implement a systematic process for inquiry into classroom practices in writing. We recognize that the issues that arise for an LSC at one site may also arise at other sites, and we will draw on the group's

and researchers' collective expertise to address these issues. As a group, we hope through our inquiry into teaching practice to increase our understanding of conducting a comprehensive inquiry about writing instruction and writing achievement.

4. PLAN, CONDUCT, AND COMMUNICATE RESULTS OF FOLLOW-UP WITH TEACHERS WHOSE DATA ARE LATE.

If a teacher's data are 1 week later than expected, you will note that delay and plan to contact the teacher. If data are 2 weeks late, you will contact the teacher by email or phone, or visit the teacher's school to obtain information about how to assist the teacher with turning in the data.

You will want to establish with your participating teachers the best method(s) for contacting them. In some cases, follow-up may mean going to the school, but keep in mind the parameters for working with study teachers and the need to maintain good relationships with them. You will then need to communicate the result of your follow-up activities (e.g., "heard back from teacher, who promised she would return data next week") to the SRI liaison.

5. ALERT SRI LIAISONS WHEN DATA ARE 3 WEEKS LATE AND WHEN ISSUES THAT COULD COMPROMISE THE STUDY ARISE.

If data are 3 weeks late, you will alert the SRI liaison, and the two of you will work together to plan a strategy for assisting the teacher submit her/his data.

You need to refer the following problems to SRI because they could compromise the integrity of the study:

- inability of a teacher to meet any requirement of the study;
- anticipated delays beyond 2 weeks in submitting data;
- change in a teacher's assignments;
- changes in target class make-up resulting form shifts in students within the class or school;
- questions about data collection not covered by the guides; and
- when a "dormant" Teacher Consultant (TC) becomes active in a control school.

SRI SITE LIAISON RESPONSIBILITIES

- Initiates calls or emails (preferably a phone call) once per week with the LSC.

- Sends the site report on late data to the LSC as the basis for a call/conversation.

- Serves as the backup to contact teachers if data are more than 2 weeks late if the LSC is not available to do so.

- In consultation with the data team, solves problems referred to SRI.

- Refers study participants, as appropriate, to more senior members of the study team.

- Handles communication regarding any issues about study timelines and payments/incentives.

- Communicates with site visitors about any ongoing site/school challenges and meets briefly with the site visitor team to prepare them for each school visit.

Logistics for SRI Liaisons:

- Each SRI site liaison will be responsible for 4 to 5 NWP sites.

- Intensive data collection periods (e.g., fall 2007) will involve multiple email messages and telephone meetings for tracking teachers/data and anticipated submissions.

- The site liaisons will discuss teachers who require phone or fax follow-up and arrive at strategies for supporting them and following through to assure that completed data are turned in on a timely basis.