CPRE Occasional Paper Series

Penn Literacy Network: A Case Study of Implementation in Three Schools

Executive Summary

The Penn Literacy Network (PLN) is primarily a non-prescriptive professional development model focused on training individual teachers in literacy strategies. PLN does not focus on changing a school's organizational structure or directly changing school culture outside the classroom; instead, it targets individual teachers who are interested in improving their knowledge and skills around literacy instruction. PLN focuses on teacher change and works to create reflective practitioners who are adept at teaching literacy skills across the content areas. By increasing the capacity of teachers to engage in literacy instruction, PLN seeks to have a transformative effect not only on instruction and student achievement in reading and language arts, but in all subjects. PLN workshops and courses are intended to introduce a framework for building literacy instruction strategies, provide professional development that links literacy and student learning, and support teacher efforts to try out new ideas in the classroom. PLN staff maintain that as teachers become believers in PLN, they are apt to share their experiences with colleagues and thereby enlarge the PLN network at the school.

In the three high schools that comprise this case study, awareness was widespread. However, participation reflected the form of PLN being implemented at the school: traditional or schoolwide. In its traditional form, cohorts of teachers enroll in school-based PLN courses and/or workshops, and expanded interest is to stem from teachers who have taken PLN sharing their experiences with other teachers. The schoolwide version of PLN was developed more recently in response to the changing school accountability environment, and its form depends on the needs of the school desiring to implement PLN schoolwide. At the two early implementing schools, where PLN was in its traditional form, a limited number of teachers (seven at each school) enrolled in PLN courses. Whereas, at the mature school, PLN was being implemented schoolwide; all teachers were exposed to PLN strategies through schoolwide workshops, and about one half enrolled in PLN courses.

Changes in teacher behavior and practice, as well as the sustainability of PLN, also reflected the form of PLN being enacted at each school. Only the subset of teachers at the two traditional form schools described changes in their behavior and instructional practice. In contrast, almost all teachers at the mature school reported making changes as a result of PLN. The limited nature of participation at the two early implementing schools, where PLN was in its traditional form, impacted the sustainability of the reform. At one school, a PLN course was not offered the second year of our study, and at the other school teachers expressed concerns about whether or not PLN courses would continue to be offered. At the mature school, teachers and administrators expressed far less concern about the sustainability of PLN, reporting that PLN was fairly entrenched due to its schoolwide presence. Despite the likelihood of school-level sustainability of PLN, individual teachers across all three school said that they would continue using PLN strategies in their classrooms whether or not PLN continued at their school.

Although the scale of implementation reflected the form of PLN enacted at each school, at times each school's experiences with the reform were quite similar. Five main variables help to explain both overall implementation as well as the variation across the three schools, including the reform's design, district role, school leadership, the existence of feedback loops, and communication. Overall, the role played by the

district, leadership around PLN at the school level, and the sense of urgency to change instructional practice carried implications for how PLN played out at each school.

I. Introduction

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 increasingly relying on external school reform organizations. However, the challenge of making improvements in schools, and in high schools in particular, is well documented (e.g., Siskin, 2003).

To better understand this challenge, researchers at the Consortium for Policy Research in Education (CPRE) have examined the interactions between five reforms and 15 high schools over a two-year period. Reforms in this CPRE research project include: High Schools That Work, First Things First, Ramp-Up to Literacy, the Penn Literacy Network, and SchoolNet. These reforms were selected as representative of the types of external assistance found in high schools during previous CPRE research (see Gross & Goertz, 2005). One way in which we are sharing our research is through the development of case studies that examine the progress of each reform in a sample of schools at different points of implementation.[1] This research, including the case study presented here, is *not* an evaluation of either the schools or the reforms. Readers may be interested in placing this case study within a larger research context. However, that is beyond the scope of this case study. Instead, we offer the reader a richly descriptive investigation of reform use at three high schools.

Methods. The case study presented here examines the progress of the Penn Literacy Network (PLN) in a sample of schools at different points of implementation. It draws from interview and survey data collected in three high schools and districts across the country, and from provider[2] staff during the 2004-2005 and 2005-2006 school years. At our request, PLN staff identified three schools with which they had collaborated for one to five years. PLN1[3] was in its first year of implementation and PLN2 was in its second year of implementation at the time our initial visit in 2004. The mature school (PLN3) was chosen by PLN as representative of a school where the reform had been in place for more than three years and offered a best case scenario for implementation.

PLN1 and PLN2 were visited three times (at the beginning and end of the 2004-2005 school year and at the end of the 2005-2006 school year) while PLN3 was visited once (at the end of the 2004-2005 school year). PLN1 and PLN2, the two early implementing schools, provided data about the implementation process—the focus of this case study—and were thus visited multiple times so that we could chart their early steps with the reform. PLN3, the mature school, served as a point of comparison and thus was visited only once. During each visit, interviews were conducted with teaching and administrative staff at the school. Staff members with both central and peripheral involvement with the reform were targeted. During the first two visits to PLN1 and PLN2, interviewees included each content area department chair, all teachers participating in PLN (seven at each school), and a school-level administrator (e.g., principal and/or assistant principal). For the final visit to PLN1 and PLN2, only teachers who had taken or were currently enrolled in PLN courses were interviewed, and again a school-level administrator was also interviewed. During the only visit to PLN3, the principal and each content area department chair were interviewed, in addition to teachers identified by the school from all content areas who where participating in PLN through workshops and/or courses. Additionally, we

[1] Case studies for each of the other four reforms can be found by visiting www.cpre.org.
[2] We use the term "provider" to refer to the external school reform organizations that offer reforms to schools and districts, such as PLN.
[3] The high schools in this study range from early implementers to mature schools. After the provider abbreviation, the number 1 denotes a school that was in its first year of implementation, the number 2 a school that was in its second year of implementation, and the number 3 a school that was implementing for 3-5 years.

interviewed staff members from the central office in each of the school districts and staff from PLN. In total, as Table 1 shows, our findings are based on 95 semi-structured interviews lasting between 30 and 60 minutes each.[4]

Table 1. **Summary of Interviews**.

	PLN1	PLN2	PLN3	Total
School-level Interviews (Fall 2004)	13	15	0	28
School-level Interviews (Spring 2005)	13	11	14	38
School-level Interviews (Spring 2006)	9	10	0	19
District Interviews (2004-2006)	2	2	1	5
PLN Representatives (2004-2006)	n/a	n/a	n/a	5
Total				95

In addition, at all three schools a survey was conducted with all teaching staff in the 2004-2005 school year. The survey provides data about both the enactment of components of the reform and communication among staff in each school. In the two schools at the earlier stages of reform implementation, the survey was administered a second time, at the end of the 2005-2006 school year. As Table 2 shows, our findings in this case study are based on 188 surveys from spring 2005 and 105 surveys from spring 2006, with school response rates ranging from 57-86%.[5]

Table 2. **Summary of Survey Responses**.

School	Round	Number of Respondents	Total Number of Teachers	Response Rate
PLN1	1	60	98	0.61
PLN1	2	59	104	0.57
PLN2	1	46	54	0.85
PLN2	2	46	54	0.85
PLN3	1	82	95	0.86
Round 1 Responses		188	247	0.76
Round 2 Responses		105	158	0.66

This case study uses a mixed-method design. Qualitative data were analyzed iteratively using a set of codes derived from existing research literature, as well as our previous and ongoing data collection and analysis. Simultaneously, survey data were analyzed in order to provide schoolwide measures of reform use, teacher familiarity and comfort with the improvement program, perceptions of school change, and communication patterns among high school faculties. Using both the qualitative and quantitative data, case studies were

[4] See Appendix A for sample interview questions.
[5] See Appendix A for sample survey questions.

developed for each school. These findings were then aggregated, with analysis focused on factors explaining patterns and/or variation in implementation. It is these aggregate descriptions and analyses that are presented here.

Study schools. Two schools in this study (PLN1 and PLN2) are located in suburban districts, and each school is the only high school (grades 9-12) in its respective district. At PLN1, there are about 1,400 students, 25% of whom are students of color. At PLN2, there are about 600 students and less than 10% are students of color. No students at either school are eligible for free and reduced price lunch. Both districts have above average student performance and have met, or just nearly missed meeting, state and federal performance targets in recent years.

The other high school in this study (PLN3) is a junior-senior high school (grades 7-12) of about 900 students located in a small city. More than 95% of students are White, and about 36% are eligible for free and reduced price lunch. The district is identified as among its state's most economically disadvantaged and has been plagued by low student performance over the years. As a poor and low performing district, PLN3 has been granted additional financial assistance from the state. In order to receive the additional state aid, the district was required to have schools implement a whole school reform. At the time, the school had just started working with PLN and wanted to continue the relationship. To do this, school and district officials worked in collaboration with PLN to modify the traditional PLN model (described in Section II) to meet criteria outlined by the state. In contrast, PLN1 and PLN2 were implementing the traditional form of PLN.

Limitations. The research presented here is not an evaluation and thus is not generalizable to other schools and districts. Evaluations require very different measures, samples, and methods. In contrast, this research used sampling and data collection methods designed to understand teacher and administrator experiences with the reform and their sense of the reform's progress in three schools. As a result, references to "change" or work related to the reform are based not on external measures such as classroom observations or student achievement, but instead reflect the perceptions of school, district, and improvement organization staff as expressed through interview and survey data. In addition, our findings heavily emphasize the experience of those schools that are relatively early in their implementation processes.

Overview. This case study is divided into six sections. Following this introduction, the second section offers a brief overview of PLN as it was designed by its creators. The third section describes the ways in which the reform was interpreted and used at the school level. The fourth section documents individual and organizational outcomes that were attributed to the use of PLN at the school or district level. The fifth section identifies several factors at the reform, school, and district level that help to explain patterns or variation in reform use across schools. Though findings are drawn from a small, non-random sample, it is our hope that the factors we identify will provide the reader with useful insights into the practitioners' perspective when considering implementation of external school reforms in other contexts. The final section of this case study briefly discusses several implications of our findings for the design of high school reforms and for potential consumers (at the school, district, and state level) of those reforms.

II. Reform Overview

A. Background

PLN was started at the University of Pennsylvania in 1981, and grew out of a framework created for the Pennsylvania State Department of Education. PLN initially provided training for pre-K-12 teachers in literacy strategies through a continuing education program at the UPenn Graduate School of Education. Over the last 25 years, PLN has expanded to include professional development opportunities for educators in a variety of subject areas, with literacy as its fulcrum. PLN estimates that more than 22,000 educators have received

training in the areas of reading, writing, mathematics, science, and technology through its courses, workshops, and mentoring programs.[6]

B. Theory of Change

PLN focuses on teacher change and works to create reflective practitioners who are adept at teaching literacy skills across the content areas. By increasing the capacity of teachers to engage in literacy instruction, PLN seeks to have a transformative effect not only on instruction and student achievement in reading and language arts, but in all subjects. PLN has developed a series of programs to train teachers from any discipline in literacy techniques that are rigorous and research-based. Workshops and courses are intended to introduce a framework for building literacy instruction strategies, provide professional development that links literacy and student learning, and support teacher efforts to try out new ideas in the classroom. PLN staff maintain that as teachers become believers in PLN, they are apt to share their experiences with colleagues and thereby enlarge the PLN network at the school.

C. Goals of the Reform

The reform has four goals:

- To offer teachers and school leaders a literacy-based framework for improving teaching, learning, and assessment at every grade level across the curriculum.
- To engage teachers in critical reading and writing, and in conversations with their peers for their own development and to serve as a model for their teaching.
- To guide teachers in conducting classroom tryouts and in sharing their experiences with their colleagues.
- To work with teachers and school leaders in a long-term process of collaborative construction of research-based curriculum.[7]

Additionally, while working with small groups of teachers or teacher teams at individual schools is certainly in line the agenda of the PLN, the organization also desires to see the reach of its program spread to all teachers in schools and districts with which it has established a relationship.

D. Reform Description and Roll Out

PLN is primarily a non-prescriptive professional development model focused on training individual teachers in literacy strategies. PLN does not focus on changing a school's organizational structure or directly changing school culture outside the classroom; instead, it targets individual teachers who are interested in improving their knowledge and skills around literacy instruction. However, PLN does identify several essential school-level conditions which are believed to be crucial for the successful implementation of the reform. For example, PLN desires that it be the only literacy initiative at a school, wants evidence of leadership capacity to support its work, and expects a critical mass of teachers at a school to participate in training.

PLN is run by a small staff that provides on-site training through graduate-level coursework, staff development workshops, and mentoring programs on a fee-for-service basis.[8] In addition, the organization

[6] For more information on PLN see www.gse.upenn.edu/pln.
[7] www.gse.upenn.edu/pln/faqs.html.

maintains a pool of PLN-trained facilitators who also lead PLN workshops and courses, and a team of mentors who supply on-site staff development and coaching. PLN staff believe their work becomes much more effective when schools can add the mentoring component to the package of services purchased.

Typically, PLN courses and workshops enroll cohorts of teachers of similar grade levels (e.g., elementary or secondary), and PLN courses usually meet every other week throughout the school year. PLN's introductory course (Course 1[9]) for secondary teachers presents teachers with PLN's approach to literacy instruction and gives them "practical strategies and applications that help establish a literate classroom environment in support of learning across all subject areas."[10] PLN also offers coursework in reading, writing, mathematics, science, and technology, but Course 1 is considered the fundamental course and the first one offered at schools that partner with PLN.

In its traditional form, PLN is introduced into a school/district through a personal relationship with a district administrator, school leader, or a teacher who has had prior experience with or training from PLN. When the reform is offered at a school, PLN seeks a working relationship with a district point person to ensure the reform is supported and trainings are recognized as accredited professional development courses for participating teachers. Who takes on this role is left up to the district, and the exact role and responsibilities of this person are not specified by PLN.

Participation in PLN professional development is optional because PLN believes that voluntary participation enhances teacher buy-in and commitment. Initial interest in the first PLN course to be offered at a school is built through an introductory presentation to all faculty. Continued and expanded interest is to stem from teachers who have taken PLN sharing their experiences with other teachers. Ultimately, PLN hopes all teachers in a school will take courses and use its strategies. To do this, PLN depends on a word-of-mouth strategy not only to spread across teachers within a school but also to spread interest in PLN from school to school, and district to district. PLN centers on professional training leading to increased student learning through literacy, believing that the more teachers who take PLN, the deeper and wider it will be implemented in a school, and therefore the greater the likelihood that it will have a positive effect on student learning schoolwide.

More recently, in response to the changing accountability environment in which schools operate today, PLN has worked with a few schools to adapt its design so it can be implemented as a schoolwide model (e.g., PLN3).[11] In this form, PLN depends on the needs of the school requesting the adaptation. It is important to note that even as a schoolwide reform, training teachers in literacy strategies is still at the heart of the design and PLN is still very much focused on the individual teacher and classroom.

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[8] PLN courses are credit-bearing, graduate-level, continuing education courses that are taught on-site. Each course is approximately 30 hours and typically meets every other week. Currently, more than 10 courses are available. Workshops are often "mini" versions of the courses, and are available as a multi-day workshop series or a single or half-day session. Workshops are usually conducted during in-school professional development time. A mentor is a PLN staff person (a facilitator) that works with teachers throughout the school year to implement PLN strategies. Mentoring occurs in conjunction with PLN courses and workshops. The focus is on providing in-school support through observation, discussion, and feedback. (www.gse.upenn.edu/pln/index.html)

[9] In this case study, PLN1, PLN2, and PLN3 refer to schools, rather than PLN courses, which are referred to as, for example, Course 1.

[10] www.gse.upenn.edu/pln/programs_elem.html.

[11] Also, in 2005, PLN entered into a partnership with the Annenberg Foundation to help lead the Pennsylvania High School Coaching Initiative, a 3-year $30 million project to supply math and literacy instructional leadership training and coaching to at least 10 'high need' schools and school districts in Pennsylvania. (http://www.pacoaching.org/) It is possible that this project and future involvement in other ventures may reshape the way PLN has traditionally operated.

III. Enactment

A. Awareness

All three districts played a critical role in the introduction of PLN to the schools in our study. At two of the schools (PLN1 and PLN2), PLN was brought in as a district-wide (K-12) initiative, spearheaded by an individual or group of individuals at the district level who believed PLN could benefit their teachers.[12] At PLN3, two teachers initially introduced PLN in its traditional form. But when the school was required by state mandate to adopt a whole school reform, the effort to take PLN schoolwide was advanced largely by the district, in particular the district superintendent.

At the school level, general awareness of PLN was widespread at all three schools.[13] Nearly all teachers were introduced to PLN through presentations led by a PLN facilitator, which served as a way to inform teachers about PLN and the opportunity to sign up for the first course (Course 1). At PLN1 and PLN2, however, only teachers who enrolled in PLN courses received continued training. At PLN3, the school implementing PLN schoolwide, all teachers were required to receive some level of instruction on PLN strategies. At this school, teachers who began teaching at the school after the initial introductory presentation received information about PLN and its courses through schoolwide workshops. Whereas at the other two schools, no additional schoolwide PLN information sessions were held after the initial introductory presentation, thus limiting both new and existing teacher awareness of the reform.

Turnover of school and district administrators significantly affected awareness, especially at the two schools implementing PLN in its traditional form. For example, a new principal and two new assistant principals were hired at PLN1 at the start of the second year of our study. In contrast to his predecessor, the new principal had no awareness at all of PLN and how, or even if, it fit with school and district priorities. PLN2 was hit with a double dose of turnover around the design. At the district level, the superintendent and the assistant superintendent of curriculum, who were both knowledgeable about and supportive of PLN, retired in successive years. This was particularly devastating because the losses at the district level corresponded with the departure of the individual who was the driving force behind PLN at the school level. His successor, who took over the role of coordinator for PLN at the high school, had limited experience with and understanding of PLN.

B. Participation

The nature of participation in PLN is professional development, primarily through PLN workshops and courses. PLN's primary "customer" is the individual teacher and, therefore, its product and attention are focused at that level. At the schools in this study, the scale of participation reflected the form of PLN being implemented at the school: traditional or schoolwide. In PLN's traditional form, participating teachers are those enrolled in a PLN course (e.g., Course 1). In the schoolwide model, all teachers are considered participating teachers.

At PLN1 and PLN2, the two traditional form schools, participation was very limited; seven teachers at each school enrolled in PLN courses.[14] In contrast, participation in PLN was very broad at PLN3, owing to the schoolwide nature of the reform. At this school, PLN courses were available to individual teachers, and all school-based in-service sessions were transformed into PLN workshops. This increased the number of

[12] In the small PLN2 school district, the high school department chairs were viewed as de facto district officials. In this case, the then-English department head was part of the team responsible for bringing in PLN.
[13] Survey results show that 85-94% of teachers at PLN1, 88-98% of teachers at PLN2, and 98% of teachers at PLN3 were aware of PLN's presence at their school.
[14] The seven participating teachers at each school represent 11% of teachers at PLN1 and 14% of teachers at PLN2.

teachers schoolwide who were involved in PLN in comparison to the other two schools. Only 14-18% of teachers said they were somewhat to very involved in PLN at the two schools where only a subset of teachers enrolled in PLN courses (PLN1 and PLN2). In contrast, 86% of teachers at PLN3 said they were somewhat to very involved in PLN, and about one half of the teachers chose to enroll in PLN courses. Even administrators and district personnel for PLN3 were required to be exposed to the principles of the reform.

To encourage participation and underscore their support for PLN, the three districts offered financial incentives to teachers. Initially teachers at all three schools were reimbursed for the financial cost associated with PLN courses, but over time funding reductions at some schools limited the amount of money teachers could be reimbursed, especially at PLN3. At PLN1 and PLN2, teachers had to pay for courses upfront and then were reimbursed. PLN staff felt this was a disincentive for some teachers at both schools. Salary incentives were also available to some teachers, and teachers were able to earn graduate school or state-required professional education credits as a result of taking PLN courses.[15]

C. Professional Development and Components

The focus of PLN's design is instructional practice. Implementation of the reform generally consists of school-based professional development through courses and workshops, and supplementary mentoring when requested (mentoring is further discussed in Section III-D). Generally, PLN offers 10 separate courses. And while it is recommended that all schools begin with Course 1 and then Course 2 because they provide the philosophical and pedagogical underpinnings of PLN's approach to literacy instruction, PLN has made exceptions to meet the needs of districts and/or schools.

For the two schools implementing the traditional form, PLN was enacted in accordance with its design the first year: Course 1 was offered at both schools. But, as noted in the previous section, participation at the two schools was limited.[16] The following year, however, enactment differed at the two schools. PLN1 dropped the reform at the high school, discontinuing PLN's formal presence at the school (although the district still offered PLN courses to teachers in grades K-8). For teachers at PLN2, the only option available was to enroll in a district-wide (K-12) PLN course (Course 5).[17] Again, only a small number of high school teachers enrolled, and all but one had taken Course 1 the previous year. The teachers who took both courses were not as pleased with Course 5 as they were with Course 1. They felt Course 5 did not offer much new information with regard to high school literacy strategies or the overall framework of PLN. Moreover, they felt the course focused more on elementary school instruction. One PLN2 teacher noted, "…content's entirely different and not as applicable, I think people feel, to the secondary level."

Teachers speculated and district officials confirmed that low interest and participation rates were the reason for the changes that occurred at both schools from year one to year two. Not enough teachers at either high school were interested to justify offering a separate course for secondary-level teachers. However, school and

[15] Teachers in PLN courses can earn credit through the Graduate School of Education at the University of Pennsylvania, but because PLN courses are considered continuing education courses, and not graduate education courses, they do not necessarily count towards a master's degree. Teachers at some schools expressed great frustration with this, saying that this was not clear up front. Some other area universities have given credit, at least partially, for PLN courses taken by teachers.

[16] At both schools, middle school teachers were also enrolled in the same courses; together the number of teachers from the high school and middle school were sufficient to offer a course the first year.

[17] Course 2 focuses on curricular planning at the secondary level, building from the strategies taught in Course 1. At PLN2, there was not enough interest in PLN at the secondary level (high school and middle school) for Course 2 to be offered the second year. Participation levels for PLN were stronger at the elementary level, so the district decided to offer a more general PLN course (Course 5) that was not grade-level specific and open it up to teachers district-wide. This way PLN was still offered in the district and secondary teachers who wanted to take another course could.

district officials for the two schools were quick to point out that low high school participation rates did not reflect dissatisfaction with PLN. Instead, it reflected teacher demographics. Many teachers at both schools had earned or were working toward a graduate degree, had fulfilled state professional education requirements, or were not eligible for salary incentives because they already maximized their opportunities. Simply put, the pool from which to draw teachers for PLN courses was fairly small at both schools.

Enactment at PLN3 looked quite different than it did at the other two schools. PLN3 had just started working with PLN in its traditional form when changes external to the school (i.e., state and federal requirements) forced it to adopt a whole school reform. As a result, all teachers were required to receive some level of training; thus, PLN strategies were taught in PLN-led workshops during in-school professional development sessions throughout the school year. PLN courses were also available to teachers, and true to the traditional form of PLN, enrollment was voluntary. In addition, some teachers who became more experienced with PLN (and one teacher who was a PLN-trained facilitator) led their own school-based PLN trainings (e.g., new teacher training). Over time, five different PLN courses were offered at the school, and one half of the teachers at the school enrolled in at least one course. Beyond the two foundation courses (Courses 1 and 2), less than one fifth of the teachers took a more advanced course, and those who did were more likely to enroll in more than one.

As a result of the large number of teachers trained in successive years and through a number of different formats, two tiers of engagement began to emerge at PLN3. One tier was comprised of teachers who were exposed to PLN at the most superficial level: PLN schoolwide workshops. Teachers who made up the other tier continued beyond the schoolwide workshops and enrolled in PLN courses taught at the school. In many cases the tier in which a teacher fell impacted his/her use of PLN strategies. Further discussion of this follows in Section IV-C.

D. Technical Assistance and Support

In addition to PLN courses and workshops, schools and districts can purchase ongoing technical assistance and support from PLN. This “mentoring” component includes observations and feedback by a PLN staff person for teachers enrolled in PLN courses.

In the first year of our study, two schools (PLN2 and PLN3) signed up for the mentoring add-on, which was paid for by each school’s district. The two schools had quite different experiences with their PLN mentors. First, mentors varied in the number of visits made during the school year and teachers observed. At PLN2, the mentor visited PLN teachers’ classrooms two times during the school year. At PLN3, the mentor observed all teachers if they requested his assistance, although his primary focus was on teachers enrolled in PLN courses. A likely explanation for this difference is that PLN was being implemented in its traditional form at PLN2 and schoolwide at PLN3. A second difference in the experiences of the two schools was the level of teacher satisfaction of the support they received from their mentor. At PLN2, teachers reported inconsistent levels of feedback from their mentor. Also, the function of the mentor—supportive or evaluative—was unclear until further into the school year. Teachers might have utilized the mentor differently had they understood her role was to support them. At PLN3, teachers were generally pleased with their mentor, describing his relationship as an ongoing conversation with teachers to help them implement PLN in their classrooms.

Ultimately, both schools decided not to renew the mentoring option in the second year of our study. At PLN2, where teachers were mostly dissatisfied with their mentoring experience, a clear reason was never given but teachers implied that the cost of the mentor was not commensurate with its value. PLN3 received less state aid than expected, which was used to fund PLN including the PLN mentor, and as a result had to drop the mentoring option. But unlike the other school, this school was reluctant to discontinue this part of their PLN program and the superintendent said they hope to be able to start it up again.

E. Monitoring

PLN itself does not perform any specific monitoring functions around the implementation of the reform beyond surveying teachers before and after a PLN course. That responsibly is left up to the schools and/or districts in which PLN is being used. Thus, efforts to monitor the roll out of PLN looked different at each school.

Two of the three schools in our study reported some monitoring around PLN. The types of monitoring differed dramatically in terms of purpose and amount, most likely due to the form of PLN in each school: traditional or schoolwide.

At the school implementing PLN schoolwide (PLN3), many types of monitoring activities related to PLN took place. Some examples included requiring teachers to list PLN strategies on their lesson plans and to follow a department-specific schedule for using one of PLN's writing strategies. While teachers were required to turn in lesson plans, they did not think the lesson plans were reviewed regularly because they did not receive feedback. One department chair said she viewed the lesson plans more as an exercise to think through PLN strategies and how they could be included in classroom practice, but not as a monitoring tool. PLN strategies were also included on a checklist used by school administrators when they conducted teacher observations. In addition, the district tracked student test scores, as it expected implementation of PLN to result in higher scores on the state assessment. Although these monitoring activities were taking place at the school, teachers were uncertain about the extent of monitoring related to PLN in terms of who was monitored, and what occurred during and as a result of the monitoring.

At the other school (PLN2), the focus of the monitoring efforts was more narrow and not necessarily on PLN implementation. The principal was responsible for observing and meeting with teachers who took PLN courses and were participating in the district's salary incentive program. Teachers in this program were eligible for a salary increase after completing a recognized professional development course (e.g., PLN). Separate from this, no one interviewed was aware of how the school ensured that teachers who were enrolled in PLN utilized the strategies in their classrooms. This is likely because PLN was viewed more as a professional development option for teachers at the school than as an instructional reform.

F. Fidelity and Adaptation

Teachers sometimes had difficulty judging whether they had made modifications to PLN strategies at the individual level, noting that PLN strategies are designed to fit individual teaching styles; teachers can "tweak" the strategies to fit the needs of their classes. While PLN teaches specific strategies to teachers in PLN workshops and courses, teachers reported adapting strategies to some extent to better incorporate them into their personal teaching practices. Teachers at all three schools made comments similar to: "PLN strategies are not strict techniques, but can be molded" and "the great part is that it can be tailored to different subjects."

At PLN3, where PLN was the school's whole school reform, PLN was being implemented differently than at other schools using the reform. But because this decision and the subsequent modifications to the reform's design were made in collaboration with PLN, fidelity is considered in light of this adapted form. Overall, much of the traditional form of PLN—literacy training offered through workshops and courses—was maintained at PLN3, just expanded to include all teachers in the school. Some of the monitoring activities described in the previous section (which are not prescribed by PLN in any form), were put in place to ensure teachers across the school were using PLN strategies, thus permitting the school to report that PLN was being used schoolwide.

IV. Outcomes

A. Level of Understanding

Participating teachers[18] had a relatively clear understanding that the reform focused on improving literacy—reading, writing, and speaking. This is consistent with PLN's stated focus on training teachers in literacy strategies. PLN was understood to be a theoretically-based literacy program for teachers both within and outside the language arts/English classroom. Teachers expressed that the purpose of PLN is to promote literacy across the curriculum, in any subject area—"literacy is all of our jobs"—as well as to have teachers "on the same page." Another comment echoed by teachers at all three schools was that PLN "shifts most of the responsibility for learning from the teacher to the student, putting the teacher in the role of facilitator."

Survey results across the three schools are consistent with the above findings. At PLN1 and PLN2, a majority (66-100%) of teachers who took PLN courses agreed with the statement: "I understand the purpose of the Penn Literacy Network." However, school-level administrator understanding of PLN's goals and purposes was more limited at these two schools. This is likely because in both cases PLN was a district-wide initiative overseen by district-level administrators with little expressed expectation of school administrator involvement. At PLN3, 85% of teachers said they agreed with the statement about understanding PLN's purpose. School-level administrator understanding at this school was at a similar level to teacher understanding.

B. Perceived Value of the Reform

Across the three schools, participating teachers felt PLN was a "good fit" for their school. Interviewed teachers believed that PLN and its focus on literacy are important and consistent with their and their schools' viewpoint that literacy is critical to student success. The expectation that students are to be writing in all classes was praised by teachers. Moreover, teachers praised PLN because the strategies worked well with below-level, special education, and English as a Second Language (ESL) students. On the survey, teachers were asked how much they agreed with statements expressing explicit PLN tenets; for example, higher expectations for student achievement, exposure to examples of student work and classroom teaching, and providing ideas and resources for changing classroom practice. At PLN3, where PLN was schoolwide, a majority (64-70%) of teachers said that they either agreed or strongly agreed with these statements. At PLN1 and PLN2, the traditional form schools, most teachers who took PLN courses also expressed strong agreement with the statements of PLN tenets.

The PLN3 district also highly valued the reform. District staff, like teachers at the school, felt PLN was well-aligned with the district's instructional policy because it provided teachers with instructional strategies for enacting the district's curriculum. A demonstration of the district's satisfaction with PLN was the incorporation of PLN strategies into its curriculum as it was revised, in addition to expanding PLN to the junior high school and elementary schools.

[18] Teachers defined as "participating teachers" and the survey data for those teachers, unless otherwise noted, are based on the following criteria: At PLN1 and PLN2, where the survey was administered twice, only those teachers who took a PLN course are represented in the survey data. For PLN1 this means **6** teachers (6 of the 7 teachers in Course 1 took the surveys); for PLN2 this means **6** teachers in 2004-2005, and **5** teachers in 2005-2006 (four of whom overlap for the two years). At PLN3, where the survey was administered once, survey data are based on **all** survey respondents. The reason for only looking at the teachers who participated in PLN is to give an accurate picture of how teacher behavior and instructional practice were impacted by PLN.

At PLN1 and PLN2, district value attached to the reform appeared to be less, but was more difficult to determine. Improving student literacy was a priority for both districts, but PLN was by no means the sole or primary vehicle for this task. PLN was predominately seen as a voluntary professional development option for teachers; both districts had other ongoing programs that focused on literacy, specific content areas, and components of teaching and learning. Each district's commitment seemed only as strong as the willingness of teachers to participate, particularly at PLN1 where PLN courses were discontinued for high school teachers in the district in the second year of this study.

Related to the overall value placed on PLN is the way in which literacy, more generally, was viewed by the high school teachers. At the two schools where PLN was being implemented in its traditional form—and, therefore, not reaching all teachers at the school—teachers commented on stereotypes that existed about who is responsible for teaching literacy. At one school, biases existed around what classes taught and used literacy skills, and at the other school it was noted that some teachers had predispositions as to which subject area teachers had the responsibility to teach literacy. On the survey administered during the second year of our study, teachers were presented with the statement: "I believe that teaching literacy is the responsibility of high school teachers." Almost two thirds of PLN2 respondents said they agreed or strongly agreed with that statement; less than one half of the respondents at PLN1 agreed or strongly agreed, and 31% said they did not know.[19] Looking more closely at PLN2, while the survey results paint a more positive picture than did teachers' comments, the survey question was not able to get at *who* in the high school (i.e., what content area teacher) a respondent felt was responsible for teaching literacy—which was at the core of the interviewees' complaints.

C. Changes in Teacher Behavior and Practice

In any form, PLN does not require organizational or structural changes at the school level. Instead, individual teachers who take PLN classes are expected to exhibit changes in behavior and, most importantly, changes in instructional practice that reflect adoption of PLN's core principles and instructional strategies.

The scale of change at the schools in our sample reflected the nature of the PLN at each school: traditional or schoolwide. Only the subset of teachers who enrolled in a course at the two traditional form schools described changes in behavior and instructional practice, whereas most, if not all, teachers at the third school reported changes in behavior and instructional practice as a result of PLN. Of the teachers across the three schools who reported behavior changes, consistent themes emerged around generally being more literacy focused, talking about PLN strategies more naturally, PLN strategies becoming part of their "bag of tricks" (everyday repertoire of teaching strategies), and learning to think differently about how to structure and spend class time.

The main difference between changes in instructional practice by teachers at the three schools was that teachers at PLN3 more consistently used a greater number of PLN strategies. This greater consistency and use of more strategies can be attributed to PLN's longer and more widespread presence at the school. At the other two schools, participating teachers described their use of PLN as "trying out" different strategies as they were introduced in the courses. By and large, teachers' overall instructional practice was not greatly altered as a result of PLN—they used the strategies as "add-ins" when they fit.

Survey data show that participating teachers across the three schools felt confident with regard to their ability to use PLN strategies. However, teachers were split roughly down the middle about whether PLN required them to make major changes in their instructional practice. Interview and survey data on specific PLN

[19] Survey data reported for this survey question only are based on **all** respondents for both PLN1 and PLN2. In this case, the reason for looking at all respondents is to gain an understanding of schoolwide opinions about if high school teachers are responsible for teaching literacy.

strategies show that feeling capable and prepared did not necessarily translate into use of PLN. On the survey, the frequency with which PLN teachers reported using particular strategies indicates variation in actual instruction (which is not surprising given the non-prescriptive nature of PLN). Stated differently, despite feeling capable of making instructional changes and prepared to use PLN strategies in their classrooms, teachers incorporated the strategies at varying levels. Specifically, teachers tended to incorporate PLN strategies that aligned with their existing practice, while downplaying strategies that significantly challenged or altered it. PLN strategies with higher levels of use (e.g., pair-share/small group work, "do now" [20]) did not require large departures from typical classroom practice; most were similar to or the same techniques already used by teachers. On the other hand, PLN strategies with lower rates of use (e.g., using primary source documents, note-taking technique for lectures[21]) asked teachers to more significantly alter their teaching practice. The further a strategy required teachers to depart from their typical classroom practice, the less likely they were to use that strategy with regularity, irrespective of their sense of preparedness and capability.

Looking more specifically at PLN3, where all teachers were to be using PLN, the extent to which teachers changed their instructional practice to incorporate PLN strategies also appeared to be dependent on the type of PLN training a teacher underwent. Teachers who attended only the schoolwide PLN workshops expressed difficulty executing the strategies, reported using only the strategies they were comfortable with, and took fewer risks trying new strategies. In contrast, teachers who took at least one PLN course in addition to attending the workshops reported using more PLN strategies and were willing to take more risks trying new strategies in their classrooms. Essentially, different levels of exposure to PLN (workshops versus courses) had an impact on understanding, use, and consistency across teachers at the school.

D. Changes in Other Staff Behavior and Practice

Although PLN regards its primary "clients" as teachers, it does not discount the importance of leadership and acknowledges the role principals and other school leaders play. PLN does not specify that any new leadership positions or roles be created; however, interviews with PLN staff reflect certain beliefs and assumptions about the importance of leadership in successfully implementing the reform, and the type of leadership best suited to implementation. For example, PLN feels that its program works best when administrators are involved side-by-side with teachers, participating in workshops and courses, thus establishing a collaborative, collegial relationship with teachers.

In agreement with PLN's theory of change, the principals at all three schools (with the exception of the new principal at one school the second year) had knowledge of PLN's activities at their schools and knew which teachers were enrolled in PLN courses. At two schools, principals could explain where the reform fit among other initiatives at their schools, while at the third school the principal could explain why PLN was identified as the school's whole school reform. Principal engagement with and support of PLN at each school was important, but more crucial was the leadership (at least initially) by the PLN "point person" for each school and/or district. In this sample, at no school was the principal the point person.

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[20] Pair-share/small group work: This activity requires students to read and discuss their understanding of the text; they alternate in their discussion, stopping to discuss and make connections with the text. (Source: PLN3 Document)
Do now: Often used at the start of a class to stimulate student interest. Can be in the form of open writing to capture ideas (no correct answer), or in response to a certain prompt (has a correct answer). Also commonly referred to as an anticipatory set or warm-up. (Source: PLN3 Document)

[21] Primary source documents: Teacher uses documents other than textbooks when teaching a lesson and/or unit. This is an opportunity to help students apply critical reading skills to texts they may come across in their daily lives, rather than just their textbooks. (Source: PLN3 Document)
Note-taking technique: Specific technique taught by PLN (Cornell note-making) that requires students to connect, question, and interact with text when taking notes in class. (Source: PLN3 Document)

As noted earlier, PLN does not target schools, but gains access to schools and teachers through word-of-mouth recommendations. Over time, the continued role the point person played and how engaged he/she was varied by school. When the point person for a school was actively engaged with PLN, the program seemed to hold a position of greater prominence at the school. On the other hand, when the point person was less visible (e.g., demonstrated little leadership around PLN and/or was not located at the school level), PLN was not as central at the school.

E. Changes in Communication Networks and Staff Relationships

Teacher communication was affected—to a limited extent—by PLN's presence at each school. Teachers at PLN3 said they communicated with teachers in subject areas other than their own more as a result of PLN. At the two traditional form schools, teachers enrolled in PLN courses were more likely to seek each other out for advice regardless of department affiliation. Teachers continually noted that a sense of community existed in PLN courses; teachers were not segmented by department, but instead discussed schoolwide issues and teaching strategies as a united group. Also, because teachers grew more comfortable sharing with each other in PLN courses, they began to share with others outside of the courses (e.g., at schoolwide in-service sessions and with co-teachers).

Informal leaders[22] also emerged as a result of their engagement with PLN. PLN staff refer to these individuals as "legitimizers." They may be a resistant-to-change veteran teacher, or a department chair, but most importantly these individuals have influence over other teachers at the school and once they are on board, other teachers follow. A good example of this is a veteran teacher at PLN3. In his 20-plus years of teaching, this now-department chair has seen many reforms come and go, but once he was exposed to PLN he instantly got on board, took as many courses as offered, and now leads introduction to PLN workshops for new teachers. In addition, results from the survey show that having taken Course 1 dramatically increased the odds of being sought out for advice about the reform. This shows that teachers were aware of the people in the school who have knowledge and experience with PLN, and when teachers had questions related to the reform they were more likely to turn to these people for advice.

As mentioned earlier, it is part of PLN's theory of change that teachers will—on their own—engage their colleagues in new dialogues around literacy as a result of their exposure to and training in PLN strategies. There are few to no examples of this occurring at the two traditional form schools. At PLN3, teacher-to-teacher recommendations were often cited as the reason a teacher chose to take a certain PLN course, and/or why a teacher became involved in PLN beyond the required professional development workshops. This is consistent with the results from the survey that show more conversations around PLN were initiated at PLN3, and that teachers found these conversations to be more influential on their decisions related to PLN as well as on their practice.

F. Perceived Effects on Students

Teachers interviewed at all three schools credited PLN with having positive effects on students. At the two traditional form schools, teachers only spoke of perceived student changes in their individual classrooms, whereas at the school implementing PLN schoolwide, teachers gave examples of both student changes in their classrooms as well as effects on students schoolwide. Again, this can be attributed to the different aim of the reform at the schools.

[22] Informal leaders are individuals who did not hold a formal school leadership position (e.g., principal, department chair) but were identified as influential by their colleagues.

At the classroom level, teachers across the three schools believed students were more engaged and motivated in class and were reading, writing, and speaking better as a result of PLN strategies. Teachers also reported that students were getting more out of their readings because PLN strategies provided students with literacy tools that helped increase their level of understanding. Special education teachers highly praised PLN for its effectiveness with lower-performing students, and teachers also found PLN strategies to be successful with ESL students. But because teachers at PLN1 and PLN2 mostly viewed PLN strategies as techniques to be used when helpful in a lesson, they did not see, nor did they expect to see, an overall effect on student performance. At PLN3, teachers and administrators credited schoolwide changes in student performance to PLN. Specifically, increases in state test scores were attributed to the use of PLN strategies and an overall greater emphasis on literacy in the school because of PLN. Also, teachers and the principal said students expected the strategies to be used in their classes and were familiar with the strategies and the terminology. This is evidence of a feedback loop between use and effect at the school; evidence of such loops was less apparent at the other two schools.

G. Perceived Sustainability

The dissemination of PLN is highly dependent on a word-of-mouth strategy. The end goal is for all teachers in a school to incorporate PLN strategies in their classroom practice, but PLN wants teachers to sign up for courses voluntarily. PLN believes this is best for teacher learning and sustained use of PLN strategies, but means that enough teachers must voluntarily take courses in order for them to be offered by a school and/or district. Such a philosophy has strong implications for sustainability, as was evident at each of the three schools.

School-level sustainability. A different picture emerged at the two schools implementing the traditional form of PLN versus the school at which PLN was schoolwide. The sustainability of PLN was in jeopardy at both of the traditional form schools, but the reform was holding strong—with a few adjustments due to funding reductions—at the third school.

As noted in an earlier section, PLN was discontinued at PLN1 in the second year of this study (although the district still offered courses to teachers in grades K-8). And while a second course was offered at PLN2 the second year, teachers suspected and district staff confirmed that the sustainability of the reform at the school was at risk. At both schools, garnering enough teachers to enroll in PLN courses at the high school was a significant challenge. One factor that likely contributed to this is that there was not necessarily any pressure to change at either school; student performance was above average and widespread change was not a goal. In addition, although literacy was a district-wide focus, PLN was only one part of the overall strategy to address literacy in each district. Simply, PLN was seen as one professional development option among many for teachers. More directly related to PLN, teachers reported having no contact with anyone from PLN after the courses concluded. The lack of an identified “PLN champion” (the point person or someone else) at the school level also seemed to contribute to the ambiguity around the sustainability of PLN at each school.

To address the sustainability problem, some ideas were put forth for the two schools. Both districts suggested taking time off from PLN. One district thought that if they “let it rest” for a few years the teaching staff may turn over a little and more individuals might become interested in participating. The other district thought that offering a course every other year would maybe increase participation numbers. Both districts also said partnering with another smaller district might be a way to pull together a large enough group to make offering a course feasible. Interviewed teachers said that PLN would have a better chance of staying at their respective schools if school and district leaders were more involved, if participation was required of a larger group of teachers, and if the reform was more embedded within the school and district—a place of higher prominence among other district initiatives. Action on any of these suggestions remained to be seen.

In addition, two other factors impacted the sustainability of PLN at these two schools. The first was a contextual factor: district/faculty size. The size of the teaching faculty at each high school—and district-wide—was not very large; therefore, the pool from which to draw teachers for PLN courses was small. And, as noted in a previous section, not many teachers at either school were eligible to earn graduate or professional education credits or salary incentives and, therefore, were not interested in enrolling in courses.

The second factor was related to PLN's design. As stated, PLN is highly dependent on a word-of-mouth strategy. However, teachers did not have an understanding, from PLN in particular, that they were to play a role in helping the reform continue at their school. A teacher at PLN1 said:

> *I guess maybe we were supposed to get everybody on the bandwagon. I don't know what we were supposed to do with it…We never got together as a group afterwards with anybody who said, 'Now, here's the next step. You know, we want you guys to do this, this, and this with it.'*

The impact of teachers not being aware of their role in continuing PLN was very evident at the school where it was no longer offered and at the other school where its existence was threatened.
At PLN3, the school implementing PLN schoolwide, teachers generally attributed the "sticking power" of PLN to the fact that it was not very intrusive. Most teachers noted that of the available whole school reforms, PLN was the least disruptive to the school overall, posed the least threat to their teaching practice, and aligned well with the literacy goals of the school. In addition, most teachers felt that unless a remarkably better reform option came along, PLN would remain. The principal commented that PLN was pretty much entrenched and saw no reason to change. It was noted by a few teachers that because the administration was pushing PLN, teachers would continue to use the strategies. However, in order to prevent PLN from "fizzling out" over time, the school needed to focus on sustaining the reform through increased teacher support and continued training.

Overall, at PLN3, teachers and school and district staff, including the superintendent, were pleased with PLN and said that over time PLN strategies and goals had become the cornerstones of the school's reform and improvement efforts. Ultimately, they hoped to see PLN continue at the high school. The school and district faced at least two constraints in doing so, however. The first constraint was fiscal. Shortfalls in state aid, coupled with the need to support other areas of mandated professional development, meant the district could not fund PLN courses directly or pay for the services of a PLN mentor the second year of this study. In addition, PLN workshops were put on hold for another year. PLN courses continued to be offered, but teachers would have to use their contracted tuition reimbursement funds to pay for them. The second constraint was a state-mandated initiative that required identified schools, including this school, to implement small learning communities and a type of student-staff advising program in the near future. It was unclear what level of resources would be needed to implement these initiatives, which have the potential to distract the high school faculty from current reform efforts through PLN.

Individual sustainability. Despite the fact that the sustainability of PLN was at least somewhat in question at each school (much more so at PLN2 than at PLN3, and had ceased at PLN1), teachers at all three schools said they would continue to use PLN strategies in their classrooms whether or not PLN continued at their school. As noted in Section IV-F, teachers at each school highly valued the strategies learned from PLN and the positive impact they saw on the students in their classrooms.

At PLN1 and PLN2, teachers who took PLN courses (especially non-English teachers) talked about the impact PLN made on their teaching practice, and that this newly ingrained awareness of literacy would persist. Teachers were generally more aware of how students read, write, and speak in class, and how to regularly include literacy strategies in their classrooms. But despite positive teacher support for the reform and the increased attention to literacy attributed to PLN at both schools, teachers were hesitant to fully commit for fear that they would invest much time and effort into something that would no longer be offered.

This scenario played out at PLN1 in the second year of this study when PLN courses were no longer available to high school teachers. Teachers at this school were frustrated that courses were not offered again, but emphasized that they individually had not stopped using the strategies. The fear of investing time and the reform not receiving continued support still remained at PLN2 the second year, but again teachers insisted that they would keep using the strategies whether or not there was an opportunity to take more courses.

At PLN3, some teachers talked about PLN strategies now being "second-nature" and such a part of their everyday teaching practice that they no longer thought of the strategies as PLN, but just as how they teach. Other teachers, who had not been using PLN as long (i.e., newer teachers) and/or had only been exposed to PLN through the schoolwide workshops and not PLN courses, talked about having to more consciously identify PLN strategies to use in their daily lessons. Even so, teachers schoolwide were regularly incorporating the strategies in their classroom. Importantly, teachers felt PLN strategies were effective and said they would continue to use many of the strategies even if they were no longer required. Overall, teachers at PLN3 less and less viewed PLN as an external reform, but instead as their standard mode of operation, both schoolwide and in their own classrooms.

V. Explanatory Variables

Across the three study schools, the scale of implementation reflected the form of PLN enacted at each school: traditional or schoolwide. At times, each school's experience reflected which model it was enacting, but at other times, the experiences with PLN were quite similar across the three schools despite model type. Informed by previous research (e.g., Datnow, Hubbard, & Mehan, 2002), five main variables were identified that help to explain overall implementation as well as the variation across the three schools. These variables include: (1) design factors, (2) district role, (3) school leadership, (4) feedback loops, and (5) communication. While other variables (e.g., resources, external conditions) also played a role in implementation, they were often linked to one of the primary explanatory variables. Also, where interaction among these variables occurred, every effort was made to note it.

A. Design Factors

PLN is primarily a professional development model focused on literacy training for individual teachers and, based on its theory of action, PLN expects that certain actions will be undertaken and result in certain outcomes that will ultimately advance the goals of the reform. However, PLN's non-prescriptive design has strong implications for how it is implemented and its sustainability—that is, how certain actions are carried out, what outcomes result, and if its goals are advanced.

Overall, PLN's design lacks specificity around the dissemination of the reform. No real recruitment, spread, or retention strategies are spelled out by PLN, leaving the decision about how to do, and whether or not to do, these activities up to the school and district. In addition, as an instructional reform, leadership roles and expectations at the district and school levels are not defined despite the importance placed on leaders by PLN to guide and carry out the aforementioned activities. (More discussion of leadership follows below in Sections V-B and V-C.) While PLN does adhere to a loose plan for garnering interest and participation in the first course it offers at a school (Course 1), this initial introductory presentation to all school faculty only occurs after PLN has been sought out by a district and/or school. In the study schools the introductory presentation did not prove to attract a significant number of teachers (especially at the two traditional form schools in the study). Following Course 1, which appears to be PLN's most well-developed course, PLN expects that teachers who took the course will share their experiences with other teachers in the school (word-of-mouth strategy), thus generating greater interest in PLN schoolwide and prompting more teachers to enroll in courses. However, teachers were not aware of this expectation. Even though teachers did informally talk to

some of their colleagues about PLN, none were aware that they were to play a role in recruiting other teachers and in efforts to spread PLN throughout the school.

When looking at PLN recruitment, spread, and retention strategies it is important to keep in mind the voluntary nature of the reform. Whether in the traditional or schoolwide form of PLN, teachers participate in courses voluntarily because PLN believes it results in greater teacher buy-in and commitment. At all three schools, this had consequences for participation levels in PLN courses and the overall sustainability of PLN. Although the reform may have been more safeguarded at PLN3 in terms of overall sustainability because it was the school's identified whole school reform, participation levels in PLN courses, like at PLN1 and PLN2, were not high. The lack of more widespread knowledge about and interest in PLN, combined with no real organized effort to retain those currently involved or recruit new teachers, threatened the sustainability of the reform at PLN2 and led to its termination at PLN1.

B. District Role

As described throughout this paper, there were two distinct patterns of implementation across the three schools. The first pattern was demonstrated at PLN1 and PLN2 where PLN took the form of a district-supported professional development opportunity for interested teachers. The second pattern, less common across the universe of PLN schools, was exemplified at PLN3 where the reform was transformed (in collaboration with PLN) into a schoolwide form. One of the primary explanatory variables for the differences observed between schools within and across patterns of implementation involved the role played by the district. In each case, the district influenced both the way PLN was implemented as well as the prospects for the reform's sustainability at each school. In our sample, districts acted in three main ways to influence the implementation of PLN at each school.

First, and probably most significant, the district held the purse strings. To the degree that financial resources were mentioned as an influential factor with regard to implementation of PLN, they were mentioned at the district level. While it is important to note that each district we studied had only one comprehensive high school and, as a result, had close ties with their respective district offices, it is still significant that funds used for PLN always came from the district. These funds were allocated through a variety of sources, including salary and reimbursement incentives, direct budgetary allotments, and utilization of state financial aid. When limited and/or reduced financial resources raised concerns about the level of continued support for PLN, as was the case for PLN1 and PLN3, no efforts were reported on the part of school principals to reallocate school-based funds to maintain PLN. In fact, for PLN3, it was the superintendent who worked with PLN to create ways to maintain the partnership despite shrinking state aid.

Second, the sense of urgency around PLN at each school originated or was managed at the district level, and in some cases was influenced by conditions external to the district. At PLN1 and PLN2, where each district had already identified literacy as a focus prior to partnering with PLN, PLN was not the only professional development opportunity available to teachers. While both districts said they selected PLN because it fit well with their literacy goals, their willingness (or lack thereof) to establish PLN as *the* vehicle through which each school's literacy training would be carried out impacted both the implementation and sustainability of the reform. At PLN1, for example, PLN was just one part of the district's overarching literacy initiative, so when teacher interest at the high school waned, no real thought was given to discontinuing the reform, and the reform was redefined as a K-8 initiative. In contrast, at PLN3, PLN was at the heart of all the school did since the school was required to adopt a whole school reform a few years ago. Recently, however, additional state mandates forced PLN3 to start implementing other initiatives that threaten to shift the focus away from PLN. External factors such as these influenced the urgency felt by districts and, therefore, the level of priority given to PLN. The lack of external pressure to make significant instructional change left PLN vulnerable at PLN1 and PLN2, whereas highly specified external pressures impacted PLN's course at PLN3.

Third, the district was the primary conduit through which communication from and about PLN flowed. District staff played a significant role relative to communication, taking primary responsibility for communicating with PLN and informing teachers about the reform—when they understood that this was their responsibility. While school-level administrators and teachers (at PLN3, in particular) were also tasked with communication responsibilities, this function sat primarily with the district. According to PLN, one of the most critical factors influencing the successful implementation of PLN is the district's PLN point person, as this person plays a consequential role in communication both with PLN and to the school. In the sample schools, enactment mirrored the commitment and power of the point person leading the effort. In cases where PLN was not actively managed by a high level district official (e.g., superintendent, curriculum director) or not presented as the central literacy reform for the district, teacher buy-in and widespread curricular impact was less likely. In fact, district leadership had the power to determine the scale of implementation, even when the desired scale exceeded PLN's existing design at that time (e.g., PLN becoming schoolwide at PLN3). Less robust district leadership and communication limited teacher knowledge and the recruitment of new teachers, leading to declined participation—and even the termination of PLN.

In our sample, the interaction between sense of urgency and the role played by district staff was particularly notable. At PLN3, where district leadership in support of PLN was strong and a sense of urgency existed, the reform was implemented widely and sustained over a number of years. In contrast, a sense of urgency was nonexistent at PLN2 and leadership for the reform was not stable, thus contributing to the limited presence of the reform at the school and its possible termination. At PLN1, there was a growing sense of urgency about what to do with low performing students. This growing need at the school could have been matched with PLN as an initiative that could address the emerging problem, therefore, increasing the reform's longevity at the school. But without an active point person in support of PLN for the school, the link between the reform and PLN1's need to better assist low performing students was not established. Significantly, the point person has the power to create and/or manage the sense of urgency felt around the reform.

C. School Leadership

The articulated role of leadership in the PLN design is quite limited. It does not call for the creation of any new leadership positions within the school, and while principals are encouraged to participate, they are not required to take on any specific tasks related to PLN implementation, either at the school or classroom level. That said, PLN staff suggested that in cases where PLN was most successful, principals were engaged in deep conversations about instruction with teachers, and understood PLN's role in improving teaching and learning. This fostered an environment where teachers felt free to experiment with PLN strategies.

In practice, formal and informal leadership appeared to play a fairly important role in the growth and sustainability (or lack thereof) of PLN. While teachers did not generally view school administrators as leaders for PLN at the school level, turnover in formal leadership positions was cited as a contributing factor in two schools where participation in PLN decreased. At PLN2, for example, two administrators (one at the school level, the other at the district) played critical roles in introducing and "selling" the reform to the faculty. When both left their positions, their replacements, while supportive of PLN, were less proactive in engaging teachers in the reform. Also, teachers specifically mentioned recruiting and coordination as key responsibilities of formal leaders. Teachers suggested that use of PLN could or would have expanded if there had been more pressure from administrators to participate. This is supported by the case of PLN3, where PLN was implemented as a schoolwide reform. There, the principal was engaged in some aspects of instruction, conducting periodic observations, working with department chairs around teacher mentoring and scheduling, and collecting lesson plans that show how PLN strategies are being used in classrooms. Further, while PLN does not call for the creation of new positions, two teachers at PLN3 emerged as leaders for the reform. These individuals were routinely cited as the local authorities on the reform, had consistent contact with the provider, and played a key role in spreading teacher awareness of PLN the school.

Teachers also suggested that informal leadership might have played an important role in sustaining PLN. In the two schools where participation declined (PLN1 and PLN2), teachers suggested that informal leaders—those who were most respected by their colleagues—were not heavily involved in PLN, and that their involvement might have swayed other faculty to participate. This perspective was echoed by PLN staff, who sought to identify and engage such informal leaders when introducing PLN at a school. Teachers noted that the need for informal leadership presented something of a dilemma. In most cases these teachers were veterans who, while respected for their abilities, were unlikely to change their practice at such a late stage in their careers and/or did not need or desire to participate in PLN (they did not qualify for further salary increases or need more professional education or graduate credits). All in all, those who were most influential among their colleagues were least likely to actively support PLN.

D. Feedback Loops

Teachers frequently referred to the reform's practicality, its immediate application, and in a number of cases, how much their students were improving as a result of incorporating PLN strategies in their classrooms. In theory, these experiences are expected to translate into increased professional dialogue, an increasing number of teachers enrolling in PLN courses, and an expanding cadre of teachers across a school incorporating PLN strategies in their classrooms. Thus, PLN suggests that a feedback loop will develop between teachers participating in courses and the larger teaching staff as participating teachers share their experiences. This feedback loop, however, was not evident in the three study schools. Instead, we saw evidence of a feedback loop in individual classrooms between student effects and use of PLN by teachers. As teachers experienced success implementing PLN strategies and realized student improvements in their classrooms (often based on their own informal evaluations of student progress), they reported using PLN strategies more often. This occurred even in the absence of support from school administrators or test scores to verify improved student performance. Such actions hint at the power of PLN's instructional strategies and how they contribute to a positive feedback loop that encourages teachers to implement the strategies.

E. Communication

Communication among teachers, administrators, and district staff appeared to exert some influence over the spread and sustainability of PLN implementation. Specifically, communication between school and district staff was related to ongoing participation in PLN, while communication among teachers influenced ongoing expanded adoption of PLN ideas and practices. For instance, adoption of PLN at PLN3 was based on the efforts of a cohort of teachers who had previously participated in PLN courses. This group worked internally to convince other teachers that PLN was the best response to the state's mandate for reform, while "selling" PLN to district administrators as a schoolwide reform. Conversely, participation in PLN at PLN1 was discontinued for similar reasons: teachers and district staff did not communicate about next steps for PLN in the school. As a result, PLN was discontinued without significant input from the teachers.

At the same time, progress in putting PLN ideas into practice was undermined by a lack of internal communication. Teachers who participated in PLN courses had little contact thereafter, and thus received little follow-up support in implementing PLN practices in their classrooms. This finding is supported by the results of the survey: at both PLN1 and PLN2 there was an overall decrease in communication about PLN activities from the previous year. Moreover, while conversation around PLN spread very slightly throughout more of PLN2 the second year, in total, there were fewer influential conversations taking place.

VI. Summary

This case study is one part of a larger study of high school improvement. It is meant to provide the reader with an account of the design, understanding, enactment, and perceived effects of one high school reform effort and its manifestation in three high schools. This work is not an evaluation of either the high schools or PLN. Instead, it examines both the story of implementation and research-based explanations for why implementation proceeded as it did. Below, we discuss some of the implications our findings have for both those designing high school reforms as well as for potential consumers.

Prioritize. Based on this case study, the level of priority at which a reform is placed among other district and school initiatives appears to impact implementation and sustainability. As previous research has shown (e.g., Bodilly, 1998; McLaughlin & Talbert, 2003), centrality is important to a reform's success. At two schools, PLN was offered to teachers as one professional development option among many, thus lessening the attention it received from district and school officials as well as how it was viewed by teachers. Teachers had little incentive beyond personal interest in professional development to participate because the reform was not widely embraced or prioritized by either the districts or schools. At the third school, PLN held a place of prominence at the district and school level, and was the basis for teacher professional development training schoolwide. Though the reform was enacted under different circumstances at this school (i.e., state mandated adoption of a whole school reform), it serves as an example—in contrast to the experiences of the other two schools—that prioritization helps bring about circumstances under which implementation and sustainability are likely to be more successful. It is also important for priorities, especially those identified and set at the district level, to be communicated to and understood by school staff. In the case of PLN2, for example, district staff identified literacy as an area of focus district-wide and selected PLN as a way to help address this need. There was little to no evidence, however, that the link between the need for increased attention to literacy and PLN as a way to accomplish this was conveyed to teachers at the school.

The importance of clear priorities is also true for providers. One condition considered critical for implementation by PLN is that the reform be the only literacy initiative at a school. But the schools in this sample show that this was not always the case; PLN was not the sole vehicle through which literacy professional development was available at two of the schools. The difficulties these two schools had implementing and sustaining the reform indicate that if certain conditions are deemed critical to implementation—"non-negotiable"—providers need to consider if partnerships that cannot meet these conditions should be pursued.

Define leadership roles and responsibilities. Leadership around the reform is an important consideration for providers and schools and districts (e.g., Porter, Smith, & Osthoff, 1994). In its current form, PLN neither identifies *who* should be the leader around PLN (at the school and/or district level) nor outlines *what* the leader is to do in support of the reform. Despite this, PLN expects much from this person in terms of gaining initial support and participation in the reform, as well as garnering teacher interest over time to sustain the reform at a school. When it was unclear to leaders the scope of their responsibilities, they often limited their role to administrative functions. In contrast, at one school, two champions of the reform played a large role in creating and sustaining interest in PLN. Their efforts, however, were organic in nature; these two individuals did not receive any direction from the reform to guide their efforts. This school's experience teaches an important lesson: enthusiasm and leadership around a reform are essential, and when they are lacking it is even more critical for a reform to have outlined roles and responsibilities for leaders. It is also important that leaders have school-level knowledge. When a leader interacted more regularly with participating teachers and had a presence at the school as the "go-to" person for the reform, teachers felt more supported in their work and had a stronger sense that PLN would continue. Leaders who were more removed from a school (e.g., a district official) had less contact with teachers and teachers were unsure of who oversaw reform. This does not mean a district official cannot act as a school's point person for the reform, but it is often more difficult to have school-level understanding when not at the school on a daily basis.

Participation can make it or break it. A professional development-based reform like PLN (in its traditional form) depends on continuous participation levels in order to sustain a relationship with a school and district. Schools and districts considering investing in a reform of this nature need to honestly evaluate their faculty's composition and interest level. At schools with a more veteran faculty, where many have already met state professional education requirements, earned graduate degrees, and/or maximized salary incentive opportunities, the reform may not generate wide-spread appeal. Also important is faculty size, especially at the high school level. Smaller schools will likely have more difficulty generating a new crop of teachers to enroll in the reform each year, and over time retaining a critical mass to enroll in courses year after year. Gauging teacher participation levels should also be important to providers because of its direct impact on whether or not the reform will persist at a school.

Establish a dissemination strategy. When a strategy for spreading the reform throughout a school was articulated, spread was achieved. But when an explicit strategy for spread did not exist, little to no spread was realized. This finding is consistent with the literature (e.g., Porter et al., 1994). Only at one school, where the reform was intentionally brought schoolwide to comply with a state mandate, did we see evidence of schoolwide participation in the reform and use of its strategies. In its traditional form, PLN does not explicitly outline a strategy to disseminate its reform within a school—though it is a goal of the reform. It is the expectation that teachers who have taken PLN courses will share their experiences with other teachers, thus generating interest in the reform from new groups of teachers. This word-of-mouth strategy may be beneficial for bolstering teacher buy-in, but does not necessarily ensure that more teachers will enroll in PLN courses. Also important to note is that the successful spread of the reform is linked to the implications discussed above: priorities, leadership, and participation. All in all, our data indicate that without a defined strategy for dissemination, one that is communicated and understood schoolwide, spread of the reform is unlikely.

Instruction is resistant to change. Consistent with previous research (e.g., Elmore, 1996), our data show that it is difficult to have an effect on instructional practice. Teachers who participated in PLN reported applying some of the strategies in their classes, incorporating bits and pieces where they fit, but their overall instructional practice was not extensively altered. Teachers were less likely to adopt instructional strategies that required large departures from their typical classroom practice. Strategies that teachers felt complimented their current practice, those they could more easily add into their daily lessons, were used with greater frequency than strategies that more significantly challenged their instructional practice. In addition, monitoring is not part of the reform's design. It is up to schools and districts to decide how to ensure teachers are using the strategies in their classrooms. The option to purchase a mentor is available to schools, and this individual is to support teachers in their efforts to implement strategies. At the two schools that paid for a mentor (both which did not renew this additional service in the second year of this study), opinions were mixed as to the mentor's effectiveness. Providers and consumers alike should be aware that a professional development model is not in a position, by itself, to bring about whole-sale change in instructional practice.

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Appendix A

Sample Interview Questions

1) When did you first hear about PLN? How did your school select PLN?
3) How would you describe the goals and purposes of the program?
4) What changes have you made in your classroom or teacher as a result of PLN?
5) What obstacles, if any, have you encountered "doing" PLN?
6) Have you made modifications to PLN so it works better in your classroom?
7) Is anyone in the school doing anything or is anything happening to get more people on board?
8) What do you see as your role in continuing PLN?

Sample Survey Questions

How much do you agree or disagree with the following statements about the Penn Literacy Network?					
	Strongly Disagree	Disagree	Don't Know/N.A.	Agree	Strongly agree
I understand the purpose of the Penn Literacy Network.	○	○	○	○	○
The Penn Literacy Network has a detailed plan for improving instruction.	○	○	○	○	○
The Penn Literacy Network is consistent with other programs in the school.	○	○	○	○	○
The Penn Literacy Network requires me to make major changes in my classroom practice.	○	○	○	○	○
I am capable of making the changes called for by the Penn Literacy Network.	○	○	○	○	○
The changes called for by the Penn Literacy Network are helping or will help my students to reach higher levels of achievement.	○	○	○	○	○
I believe that teaching literacy is the responsibility of high school teachers.	○	○	○	○	○

Please list the people in this school to whom you turned for advice in using Penn Literacy Network strategies during this school year.	In this school year, how often have you sought guidance from this person on issues related to Penn Literacy Network?				How influential is the advice of this person on issues related to Penn Literacy Network?			
Please list up to five people; include both first and last names.	A few times a year	Once twice a year	Once or almost a month	Daily or twice a week	Not Influential	Slightly Influential	Influential	Highly Influential
1.	○	○	○	○	○	○	○	○
2.	○	○	○	○	○	○	○	○
3.	○	○	○	○	○	○	○	○
4.	○	○	○	○	○	○	○	○
5.	○	○	○	○	○	○	○	○
○ I do not seek advice from anyone in the school about **using Penn Literacy Network strategies**.								

During this school year, to whom <u>in your school</u> have you turned for advice in **selecting and planning course content coverage and pacing?**	In this school year, how often have you sought guidance from this person regarding selecting and planning course content coverage and pacing?				How influential is the advice of this person regarding your selection and planning of course content coverage and pacing?			
Please list up to five people; include both first and last names.	A few times or twice a year	Once or twice a month	Daily or almost daily	Once a week	Not Influential	Slightly Influential	Influential	Highly Influential
1.	○	○	○	○	○	○	○	○
2.	○	○	○	○	○	○	○	○
3.	○	○	○	○	○	○	○	○
4.	○	○	○	○	○	○	○	○
5.	○	○	○	○	○	○	○	○
○ I do not seek advice from anyone in the school about **selecting and planning course content coverage and pacing.**								