



RESEARCH for *ACTION*

Making a Difference:

Year Two Report of the
Pennsylvania High School
Coaching Initiative



Pennsylvania High School
Coaching Initiative

O C T O B E R 2 0 0 7



Research for Action (RFA) is a Philadelphia-based, non-profit organization engaged in education research and evaluation. Founded in 1992, RFA works with public school districts, educational institutions, and community organizations to improve the educational opportunities for those traditionally disadvantaged by race/ethnicity, class, gender, language/cultural difference, and ability/disability. For more information about RFA, please go to our website, www.researchforaction.org.

About this Report

Research for Action is conducting a three year evaluation study of the Pennsylvania High School Coaching Initiative (PAHSCI) that includes survey research as well as in-depth qualitative research in participating schools and districts. This report presents findings from the first two years of research and provides recommendations for PAHSCI stakeholders as they refine the program and for other education reformers as they consider the benefits of instructional coaching as a strategy for improving high schools and student achievement.

Mission Statement

Through research and action, Research for Action seeks to improve the education opportunities and outcomes of urban youth by strengthening public schools and enriching the civic and community dialogue about public education. We share our research with educators, parent and community leaders, students, and policy makers with the goals of building a shared critique of educational inequality and strategizing about school reform that is socially just.

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Year Two Report of the
Pennsylvania High School
Coaching Initiative

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Introduction

The Scene:

An Algebra II Classroom in
a Large Urban High School,
Eastern Pennsylvania

Ms. Davis¹ warmly greets each of the 17 students in her algebra II class by name as they enter her room. Its walls decorated with math formulas, student work and progress reports, the room provides a visually stimulating environment. As the racially and ethnically diverse group of students settles down, they turn their attention to the **Do Now**² math problems on the board. Ms. Davis, an eighth year teacher, walks along the rows, checks students' homework and comments on the progress each is making on today's task. She engages each student individually and her interactions show understanding and kindness. When she spots an error one student is making she says, with a smile, "Hey, that's a leap you're not allowed to make!" The young Hispanic male student sheepishly replies, "My bad, Ms. Davis, you're right."

Speaking to the whole class, Ms. Davis asks for a volunteer to solve the problem on the board. She gently challenges, "Who's going to go out on a limb and put their work on the board? Any brave soul?" As the student volunteer, an Afro-Caribbean female, explains her work, Ms. Davis encourages her at every step. "Yes, that's right. Yes, you showed the minus sign. Yes, you cancelled out the *i*'s. One small adjustment." The students spontaneously clap for the volunteer as she takes her seat.

From a show of hands, Ms. Davis learns that only four students had fully and correctly solved the problem. For the next several minutes, students share where they went wrong and write notes to themselves about corrections using **Collins Level One Writing**, that Ms. Davis learned while working one-on-one with a math coach. In an example of culturally relevant teaching, she enunciates vocabulary words for each of the steps involved in the solution and the students rhythmically repeat after her. For the remainder of the class, students solve similar problems from their text and pair up to practice problems for tomorrow's exam. The session ends with **Pair Share Groups** of two and three reflecting on the lesson by suggesting a "trick of the trade" that they believe will help their classmates solve similar problems on tomorrow's exam.

In an interview after the class, Ms. Davis shared that the PAHSCI coach had observed her classroom and afterward asked her "Whose voices are heard during class?" This caused her to really think about this question. After that, she began to bring more activities into her classroom where students talked to each other about solving problems. She had to overcome the sense that this was "cheating," but now she knows it has been beneficial to the students and they are learning together, not just engaging in casual talking.

¹ Pseudonyms are used throughout this report.

² Research-based instructional strategies presented in the Penn Literacy Network courses are highlighted in bold throughout this report.

The Scene:**A Ninth Grade Honors English Class****in a Large Rural High School,****Central Pennsylvania**

Ms. Bellows, a 12-year veteran, hands a 3x5 card to each of her 22 students as they file into her classroom. Engagingly decorated, with curtains at the window, the classroom is well equipped with up-to-date audio and visual technology. This group is racially and ethnically similar, with only one African American student among 21 Caucasians. Ms. Bellows points out the **Do Now** question on the board: “List similarities and differences between the movie and book versions of *The Hobbit*.” Within a few minutes, hands are waving and the class is enthusiastically generating a list, which Ms. Bellows captures on the overhead projector. She frequently voices her approval. “Excellent! A good list. You named items that the other sections missed. Good work!”

The 3x5 cards the students received as they entered the classroom each display an element of fiction. Students must find examples of these elements in *The Hobbit*. Students are familiar with this activity; in only a few minutes they have found partners to form an **Expert Jigsaw Group** to define the element of fiction on their cards. They talk in whispers, consult the dictionary, their notebooks, and the text and appoint a designated spokesperson to report to the group. As each spokesperson reports on the collaborative work of the team, Ms. Bellows expresses pride in the accuracy and completeness of the presentations.

A *Jeopardy* board is permanently mounted at the front of the room and the class is divided into two teams with a great prize for members of the winning team: six points added to their test score on *The Hobbit*. Recognizing that some students who give wrong answers are taking it to heart, Ms. Bellows soothingly encourages them with, “It’s alright. That was a particularly hard question.” Or, “Good try! You’ll get it next time.” At the end of the period, Ms. Bellows asks students to write three questions about *The Hobbit* and their answers as their **Ticket Out the Door**. Although it is the final activity of the class, students enthusiastically jot down their responses. One young male laughingly brags, “Mine are real brain busters! No one will get them right.”

In an interview after this class, Ms. Bellows reported that she and the literacy coaches had reviewed her AP curriculum. They had visited her classroom and co-taught lessons and that this impacted the way she was now teaching this course.



What do the two teachers in these classroom scenarios have in common? Both have attended professional development led by the Pennsylvania Literacy Network (PLN) and worked with an “instructional coach” as part of their school’s participation in the Pennsylvania High School Coaching Initiative (PAHSCI). Highlighted in bold are the PLN strategies each teacher used in these examples. Both show how working with a coach has helped them integrate new instructional techniques into their daily classroom practice. Students are actively engaged, taking responsibility for their own and their peers’ learning, and using literacy—reading, writing, and speaking—to accomplish the tasks of the lesson.

In 2004, the Annenberg Foundation partnered with the Pennsylvania Department of Education (PDE) to address the literacy needs of adolescents in high-need secondary schools in Pennsylvania through instructional coaching. They established the Pennsylvania High School Coaching Initiative, designed to support teachers from across the major subject areas to create literacy rich classrooms in which students actively engage in learning tasks that deepen their content knowledge and strengthen their abilities to think critically and communicate well. While most high school reforms have worked to change school structures, PAHSCI has directly focused on changing classroom instruction by infusing research-based literacy practices across the curriculum, with the support of PAHSCI literacy and math coaches.

In this second year report we demonstrate that PAHSCI is “making a difference,” that measurable progress is occurring. In Section One, we review the overall design of PAHSCI—intended accomplishments and strategies for achievement. We also present an important overall finding: PAHSCI is having the intended impacts. In Section Two, we present findings from our classroom observations, follow-up teacher interviews, and teacher survey, which indicate that teachers from across the subject areas are working with instructional coaches and adopting new instructional practices. It is clear that those involved in multiple PAHSCI program components have the deepest understanding of PLN strategies. In Section Three, we describe how instructional coaching helps teachers adopt new teaching strategies and we describe the factors that enhance coaches’ impact and those that impede it. In Section Four, we discuss the multiple sites for professional learning that are part of the PAHSCI model and how these contribute to leadership development and professional community. In Section Five, we offer the perspectives of PAHSCI participants on the project. And in Section Six, we outline recommendations for sustaining instructional coaching in Year Three and beyond and offer lessons from the first two years of PAHSCI.



Section 1A

PAHSCI's Design

The Pennsylvania High School Coaching Initiative (PAHSCI) seeks to improve student achievement in high-need high schools across Pennsylvania by enhancing the teaching of literacy skills across subject areas. It is ambitious in its scope as a statewide initiative and distinctive in its direct focus on instruction as the pathway to improving secondary education. (See the box below for a summary of the distinctive features of PAHSCI.) The program's design (see Theory of Change on page 6) relies on instructional coaching, professional development, and mentoring, and the Penn Literacy Network's framework to yield both intermediate and, over time, long term positive outcomes.

Distinctive Features of PAHSCI

PAHSCI is distinctive in its:

- **scale as a statewide initiative.**
Most coaching initiatives are district-based;
- **direct focus on classroom instruction** in high-need high schools. Most high school reform initiatives focus on changing organizational structures;
- **focus on content** – the infusion of literacy-based practices across the curriculum by PAHSCI literacy and math coaches. Many coaching models use “change coaches” who provide generic technical assistance to principals and teacher leaders but do not focus on specific professional development content;
- design which includes **interventions aimed at creating the necessary conditions** in districts and schools that will result in effective coaching and improved student achievement;
- direct site-based monthly **mentoring of coaches and administrators** by mentors;
- **research and development model** designed as a cycle of documentation, assessment and refinement, and as an effort that will create knowledge about coaching.

Improving students' literacy³ by using the support of instructional coaches is at the heart of the design. Unfortunately, many students are not gaining the literacy skills they need for productive employment and civic participation. Particularly troubling are the data for low-income students and minorities.⁴ Although progress has been made in developing literacy interventions for students in kindergarten through third grade, considerably less attention has been paid to helping high school students develop the basic literacy skills they need to learn history, science, and mathematics. The task is particularly daunting for low-income youth who often come to school with special learning needs and who have become disaffected and disengaged in large high schools where they frequently fall between the cracks.

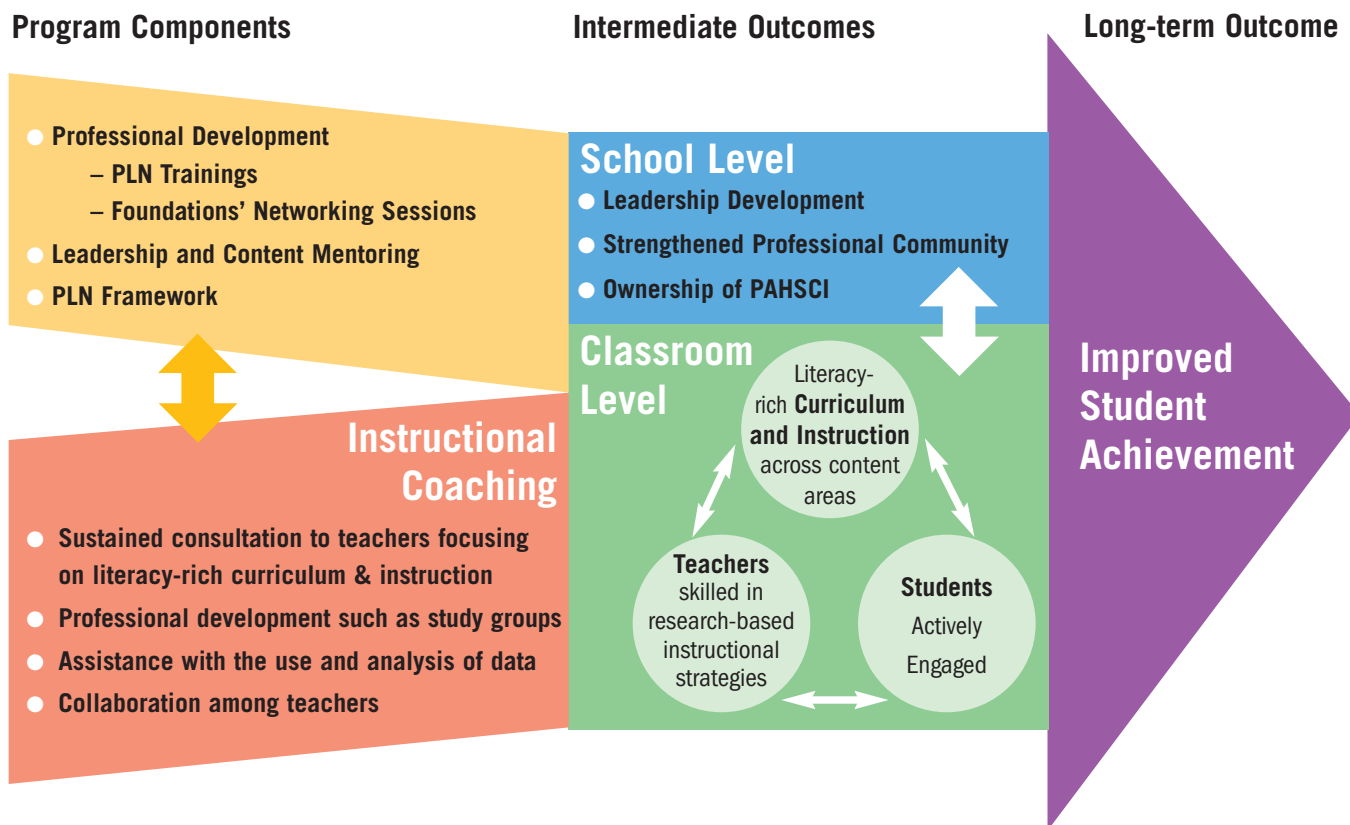
Many researchers believe that the key to improving adolescents' literacy skills is to provide strong professional development for secondary teachers—across all subject areas—to strengthen their capacity to teach literacy. In addition, instructional coaching—a relatively young reform—has been identified as a promising professional development strategy and, although there is not yet conclusive research linking coaching teachers to increased student achievement, a number of studies indicate that coaching helps teachers better understand new instructional practices and incorporate new strategies into their classroom instruction.⁵

³ We define literacy as a complex phenomenon that involves the ability to understand, interpret, create, and communicate using a variety of written materials from different contexts.

⁴ McCombs, J.S., Kirby, S.N., Barney, H., Darilek, H., & Magee, S.J. (2004). *Achieving State and National Literacy Goals, a Long Uphill Road: A Report to Carnegie Corporation of New York*. Santa Monica, CA: RAND.

⁵ Edwards, J.L. & Newton, R.R. (1995). *The Effect of Cognitive Coaching on Teacher Efficacy and Empowerment*. Paper presented at the Annual Meeting of the American Education Research Association, San Francisco, CA; Showers, B. & Joyce, B. (1996). The Evolution of Peer Coaching. *Educational Leadership*, 53, 12-16.

PAHSCI Theory of Change



Program Components

The PAHSCI design is comprised of three central components working within a theory of change to improve the academic programs and student achievement in participating high schools. Instructional coaching, together with the other program components, provides inputs in PAHSCI’s Theory of Change. In this section of the report, we describe the central components of the program, the assumptions that underlie these components, and how these components have been designed to work together in a theory of change about improving the academic program and student achievement in participating high schools.

Component One: Instructional Coaching

Embedding professional learning in the actual daily work that teachers do in their classrooms and with their colleagues makes sense as a strategy to help teachers adopt research-based instructional practices. Further, because coaches have deep knowledge about the schools in which they work, they are able to

help teachers select appropriate instructional strategies and tailor those strategies to the specific needs of the students.

PAHSCI’s literacy and math instructional coaches work with teachers one-on-one in their classrooms: planning lessons and units, providing resources, conducting demonstration lessons, co-teaching, observing, and facilitating reflective conversations after the in-classroom work. Additionally, they lead a wide range of professional development activities and plan and facilitate faculty and department-wide training sessions focused on the analysis of student performance data. Coaches also work with administrators to integrate coaching into the school culture.

Effective instructional coaching needs district and school leaders who understand and believe that instructional coaching is an effective model of professional development. Committed school leaders provide the organizational structure and resources for the successful implementation of the model.

Component Two: Professional Development, Leadership, and Content Mentoring

Recognizing that schools have limited resources, PAHSCI established partnerships with leaders in education practice to provide districts and schools with the support they need to build the necessary infrastructure, leadership, knowledge, and momentum for change. These partners include:

- The Penn Literacy Network (PLN), a professional development program within the Graduate School of Education at the University of Pennsylvania that offers a research-based framework and practical strategies for establishing literacy-rich classrooms across all subject areas. PLN provides training in its framework for coaches, administrators, and teachers through intensive summer institutes and in regional courses throughout the school year. In addition, PLN supports districts and schools by leading centralized (all participating districts attend) and regional (local sessions with selected groups of teachers, coaches, and mentors) training.
- Foundations, Inc., a non-profit organization that provides professional development, training, technical assistance, assessment tools, and publications to the education community, brings knowledge of school improvement processes and the role of school leadership in promoting professional learning. It provides leadership mentors who work with district and school leaders and coaches to establish the enabling conditions that will support the instructional coaching model and content mentors who work with coaches and other school leaders to implement the PLN framework. These mentors visit districts four times each month and provide training, ongoing technical support, and opportunities for coaches and administrators to problem solve, reflect upon their work, and refine their coaching skills. Foundations, Inc. also provides networking opportunities among districts.

Component Three: The Penn Literacy Network's Framework

All high school teachers, across all content areas, are teachers of reading, writing, and oral communication. Teachers need a shared approach to developing the literacy skills of students so that literacy instruction is coherent and consistent.

The Penn Literacy Network (PLN) offers a research-based framework and practical strategies for establishing literacy-rich, student-centered classrooms across all subject areas. PLN's framework supplies participants with a shared language for talking about instruction and student learning that in turn helps build collaborative learning communities among school-based educators. (PLN's framework is described in the box below and a list of PLN strategies appears in Appendix C.)

Penn Literacy Network's Framework

PLN's framework is based on four interrelated "lenses" from which instructional strategies are derived that promote student engagement, problem solving, and critical thinking. These lenses are central to learning and good teaching and the framework encourages teachers to use the lenses as they work with their students.

The lenses are:

- 1 meaning-centered (relating new information to existing prior knowledge);
- 2 social (learning in a collaborative, social context);
- 3 language-based (reading, writing, and talking for authentic purposes); and
- 4 human (self-reflecting to increase awareness of one's own unique learning styles).

Also integral to the framework are five critical experiences:

- 1 transacting with text,
- 2 composing texts,
- 3 extending reading and writing,
- 4 investigating language, and
- 5 learning to learn.

The training also includes strategies aligned with state and national content standards that connect disciplinary content to the real world.

The Theory of Change (page 6) illustrates how PAHSCI's program components are intended to affect both intermediate outcomes and long term student achievement outcomes. The three school level intermediate outcomes include:

- **Leadership Development:** Leadership is defined by education researchers Spillane et al. as, “the identification, acquisition, allocation, coordination, and use of social, material, and cultural resources necessary to establish the conditions for the possibilities of teaching and learning.”⁶
 - **Strengthened Professional Community:** In strong professional communities educators work together “to continuously seek, share, and act on their learning” for the purpose of improving teaching and student achievement.⁷ Building strong professional communities within schools is widely considered to positively impact teacher collaboration and thus lead to improved classroom instruction.
 - **Ownership of PAHSCI:** Research on how education innovations are sustained over time shows that ownership of the reform must change hands from external actors to internal actors (i.e., district and school practitioners). Ownership requires deep knowledge of the reform and the authority to perpetuate it.⁸
- Three additional intermediate outcomes occur at the classroom level.
- **Literacy-rich, student-centered curriculum:** Literacy-rich classrooms and student-centered curriculum emphasize the importance of having students speak, read, and write as ways to deepen their learning and demonstrate what they know. Such opportunities should occur daily for all students across all content areas.
 - **Actively engaged students:** Student engagement can be defined as “the student’s psychological investment in and effort directed toward, learning, understanding, or mastering the knowledge, skills, or crafts that

academic work is intended to promote.”⁹

Students who are actively engaged in their learning attend school regularly, learn more, are more likely to persist to graduation, and are less likely to exhibit problem behaviors.¹⁰

- **Teachers skilled in research-based instructional strategies:** When teachers consistently use research-based instructional strategies, their students show achievement gains. This is especially true for low-income and minority students.¹¹

The long term outcome of improved student achievement occurs when the program inputs create the intermediate outcomes necessary to accomplish this ultimate goal. An important goal for this evaluation has been to help PAHSCI stakeholders refine the Theory of Change and test the theory in practice by examining whether the program inputs are having the intended benefits—both intermediate and long-term.

⁶ Spillane, J. P., Halverson, R. R., & Diamond, J. B. (2001, April). Investigating School Leadership Practice: A Distributed Perspective. *Educational Researcher*, 24.

⁷ National High School Alliance (2007). *Empowered Educators*. [On-line]. Retrieved on March 20, 2007, from http://www.hsalliance.org/call_action/empowered_educators/research.asp.

⁸ Coburn, C. E. (2003). Rethinking Scale: Moving Beyond Numbers to Deep and Lasting Change. *Educational Researcher*, 32(6), 3-12.

⁹ Newmann, F. M. (Ed.). (1992). *Student Engagement and Achievement in American Secondary Schools*. New York: Teachers College Press.

¹⁰ Bowen, E. R. (2003). Student Engagement and Its Relation to Quality Work Design: A Review of the Literature. [On-line]. Retrieved on August 31, 2007, from <http://chiron.valdosta.edu/are/ebowenLitReview.pdf>; Weiss, C. C. (2003, November). *The Neglected Importance of Connections: The role of student engagement in the transition to high school*. Presented at the Association for Public Policy Analysis and Management, Washington, DC.

¹¹ Knapp, M. S., Shields, P. M., & Turnbull, B. (1995, June). Academic Challenge in High-Poverty Classrooms. *Phi Delta Kappan*, 76(10), 770-776.

Section 1B

Research Methods

In Year Two, Research for Action’s mixed-methods research continued to examine PAHSCI’s implementation and its impact on intermediate outcomes including: professional community, leadership development, literacy-rich student-centered classroom practices, student engagement, and reform ownership. Changes in intermediate outcomes are likely to emerge earlier than changes in student achievement.¹² Thus, they provide useful insight into whether progress is occurring toward the desired final results.

In reporting our findings, we draw primarily from three data sources:

- Qualitative data collected in 52 classroom observations and follow-up interviews with teachers in 7 PAHSCI schools;
- Survey data collected from teachers, coaches, and administrators; and
- Questionnaire data collected from coaches, mentors, and school and district administrators.

Almost all of the findings presented in the report are supported by data drawn from more than one data source (e.g., observation data, interview data, and survey data; observation data and interview data). Where this is not the case, we make that explicit. Bringing multiple data sources into play in an analysis strengthens the trustworthiness of the findings.

¹² Outside the scope of this report, quantitative consultants, with support from the Pennsylvania Department of Education, are conducting research to make the direct association of high participation in PAHSCI and improved student achievement.

Major Research Activities in Year Two

School Site Visits and Classroom Observations

RFA visited 7 high schools in six PAHSCI districts across the state. Schools were chosen to represent diversity in terms of geographical region of Pennsylvania (eastern, western, central), urbanicity, and school size. We focused on 9th and 10th grade English and math teachers in our school-based classroom visits and interviews. We assessed teachers’ levels of participation in PAHSCI-sponsored activities and rated them either high or low participation. We used a classroom visit guide to record both student and teacher behaviors and to assess instruction and student response on three dimensions; implementation of the PLN framework, facilitation of learning, and student engagement. Follow up interviews with teachers focused on the typicality of the lesson and the response of students, as well as on teachers’ experiences with PAHSCI and work with coaches.

These observations allowed us to provide a more finely-grained analysis of if, and how, teachers with various levels of participation in PAHSCI are integrating the PLN framework and strategies into their classroom practice, and thus help to draw an evidentiary pathway from PAHSCI activities to classroom activities. (For a more complete description of our qualitative research methods and analytical procedures, see Appendix B.)

Surveys

All teachers, coaches, and administrators in PAHSCI high schools were included in the samples for the Year Two teacher, coach, and administrator surveys. The teacher survey had a response rate of 65 percent (N=1230); the coach survey had a response rate of 96 percent (N=89); the administrator survey had a

response rate of 81 percent (N=21). Surveys focused on the following areas: respondent characteristics, school environment and professional climate, understanding of PAHSCI and the PLN framework, coaches and their role, PAHSCI supports, professional learning opportunities, professional community, instructional change, coaching challenges (coaches only), student engagement and achievement, and PAHSCI in Year Three.

We used our analysis of the teacher survey to provide a broad descriptive picture of the participation levels of teachers and to determine the factors associated with teachers' level of participation in PAHSCI. We also used our analysis of the teacher survey to determine the relationships between level of participation

and the desired intermediate outcomes of leadership development, professional community, ownership of PAHSCI goals, literacy-rich student-centered classrooms, and actively engaged students.

Questionnaires

Questionnaires were administered during networking sessions in December and May to mentors, administrators, and coaches. Questionnaires focused on their assessment of program implementation and the program's early impacts on three areas: establishing literacy rich classrooms, strengthening professional communities in schools, and developing educational leaders who have the skills to help teachers improve their practice.

Section 1C

Testing PAHSCI's Theory of Change

An important goal of the evaluation research has been to develop ways to measure implementation of the PAHSCI programmatic components, as well as the intermediate outcomes, and then to examine whether there were the intended relationships between program activities and intermediate outcomes: Did PAHSCI make the intended difference? Our analytical method included using the teacher survey to test whether teachers with high levels of participation in PAHSCI were likely to demonstrate greater association with the desired intermediate outcomes (e.g., use of PLN's research-based strategies, student engagement, leadership development, professional community, and ownership of PAHSCI) than teachers with low participation. (See Appendix B for a complete description of the survey measures and analysis.) While positive associations between high participation and the intermediate outcomes

might be supposed, they cannot be assumed. This analysis is an important test of whether PAHSCI is working in the ways intended by its designers.

Finding 1: Higher levels of participation in PAHSCI predicted higher levels in all of the intermediate outcomes. All of the correlations between participation level and outcome variables are highly significant, $p < .001$.

This analysis indicates an overall robustness of the PAHSCI model and supports the argument that PAHSCI is having the intended impacts in participating schools and classrooms. In other words, the program's theory of change is working in practice.

In the remainder of this report, we will offer a more detailed description of the impact of PAHSCI and we will discuss the factors that are contributing to progress, as well as the challenges that remain.

Section 2

PAHSCI's Impact on Teaching and Student Engagement

At first, I was very resistant. I thought, what are they [coaches] going to teach me? I've been around for a long time. And then, I listened. When I do use PLN strategies, I think I'm a better instructor. I thought I was wonderful but I was doing most of the talking. That's one of the hardest things, getting the students to participate. So now I do a lot of group work. I'm willing to try new things.

– 10th Grade English Teacher

Excerpt from RFA Researcher/Teacher Interview

RFA Researcher: *How much of the lesson that I saw today has been influenced by your work with the coach?*

9th Grade

Math Teacher: *If I didn't have the coaching, I would probably not have done this lesson at all. I would have gone right into test review.*

Undoubtedly, the real challenge for PAHSCI is changing classroom practice. In this section, we examine how PAHSCI is reaching the classroom and translating into literacy-rich instruction where teachers use a variety of research-based strategies to stimulate the active involvement of their students in learning. PAHSCI efforts are directly aimed at the classroom by providing teachers with: ongoing, high quality classroom-based assistance from instructional coaches; high quality, intensive professional development offered in courses run by PLN; and school-based professional development opportunities, including study groups, departmental meetings, and whole faculty meetings. Both the one-on-one coaching and the professional development sessions focus on the PLN framework and how to use its research-based strategies in the classroom.

Important questions for the evaluation include:

- Are teachers participating in these PAHSCI-sponsored opportunities?
- At what level of intensity are teachers involved?
- What is the impact of teachers' involvement on their classroom instruction and on engaging students more actively in their learning?

The answers to these questions provide information about progress towards the goals of the Initiative. They also provide a window into the potential for institutionalization and sustainability of instructional coaching. In order for education reforms to take hold they must have reach; they must be taken up by teachers. The reach must be both broad—increasing numbers of people embrace the reform—and deep—people have sufficient understanding of the reform to implement new practices in an authentic way.

In this section we draw from three main data sources: the Year Two Teacher Survey (N=1230); observations of lessons in 52 classrooms and follow-up interviews with the teachers in those classrooms. The survey provides information about teachers' participation across the whole Initiative and teachers' perceptions of the impact of their participation. The classroom observations provide a more nuanced and independent description of teachers' instruction.

Teachers' Participation in PAHSCI Activities

Finding 1: Seventy-four percent of teachers responding to the Year Two Teacher Survey met at least one of the four criteria for our definition of high participation in PAHSCI-sponsored activities. Seventy-two percent worked one-on-one with an instructional coach and 52 percent met with their coach frequently enough to meet the criterion for high participation.

Approximately three quarters of the teachers responding to the Year Two Teacher Survey indicated that they had participated in a PAHSCI-sponsored activity frequently enough to meet at least one of the four criteria for high participation. Almost the same number had had some kind of one-on-one interaction with an instructional coach with half of all teachers indicating they are working with a coach at least twice a semester. This indicates that PAHSCI's reach is broad and coaches are finding ways to work with a considerable range of teachers. Figure 1 shows the percentage of survey respondents who reported participating in the four kinds of PAHSCI-sponsored activities that we used

as criteria to be high participation in PAHSCI. Teachers had to meet three out of four criteria. Only 18 percent met our rigorous criteria for high participation; given that this is only the second year of the program, this is not surprising.

Figure 2 shows a further break down of the intensity of teachers' one-on-one work with coaches. Only 28 percent of teachers reported no one-on-one contact with a coach. This is encouraging in light of coaches' reports last year that they were encountering significant teacher resistance. Thirty-six percent reported that they have worked with a coach monthly or twice monthly. Likewise, this percentage is encouraging in that it indicates that coaches are getting into classrooms and working in a consultative role with more than one third of responding teachers. A promising indicator, 53 percent of teachers responding to the survey indicated that they would like to have a coach visit their classroom and offer feedback and 55 percent would like to have a coach model a lesson in their classrooms. However, the challenge that lies ahead is creating the time for ongoing, intensive coach-teacher relationships with the majority of the staff.

Figure 1

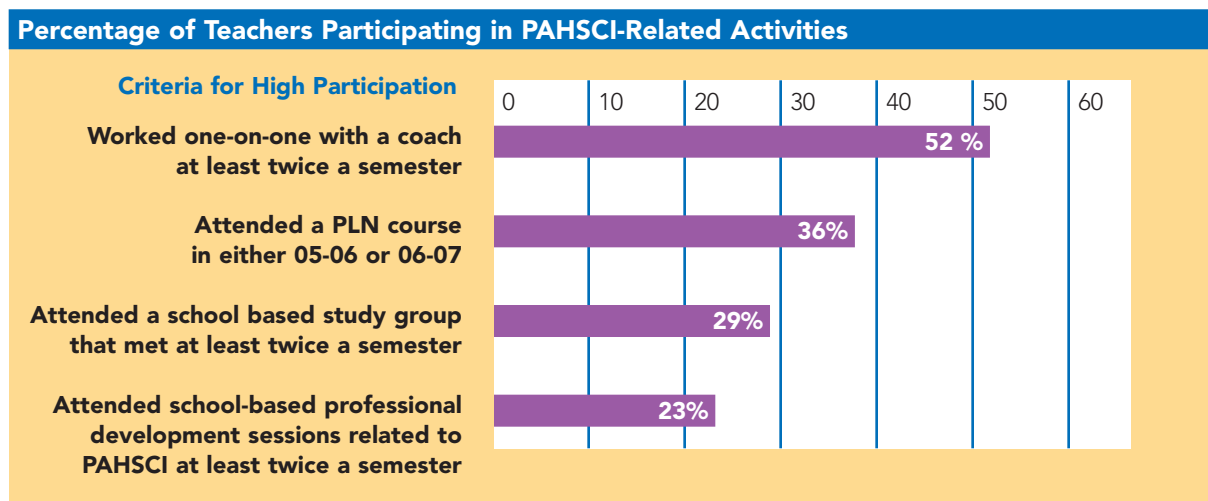


Figure 2
Teachers' Work with Coaches

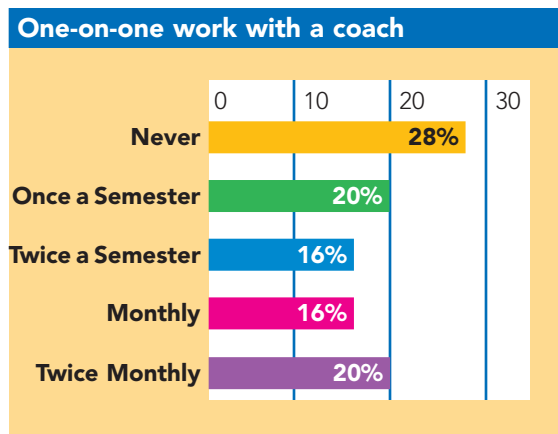
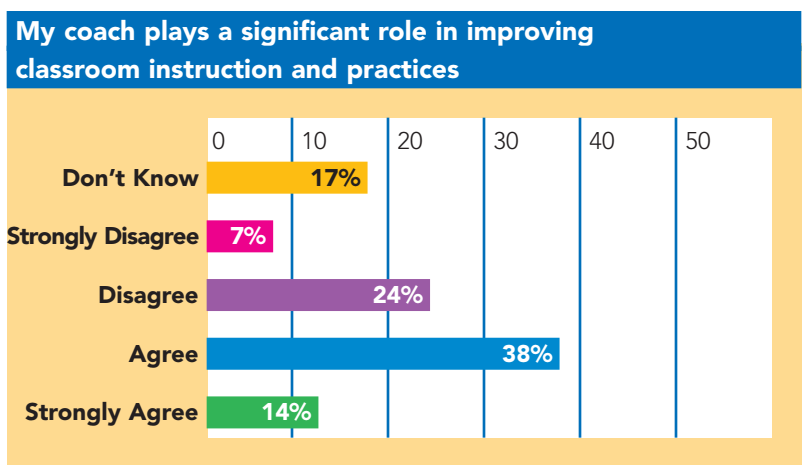
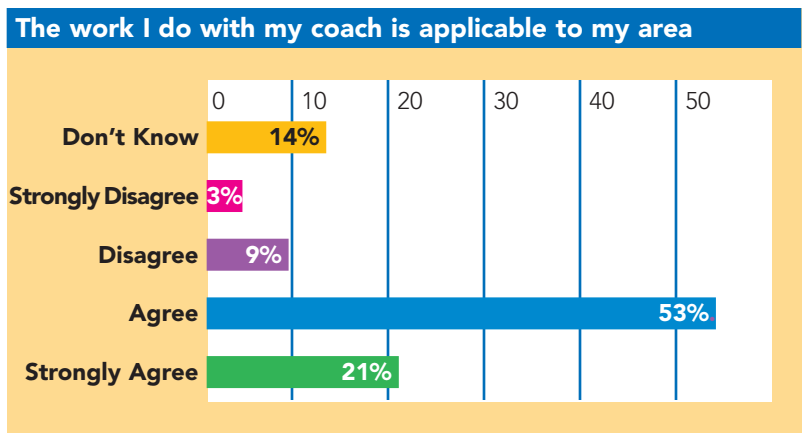
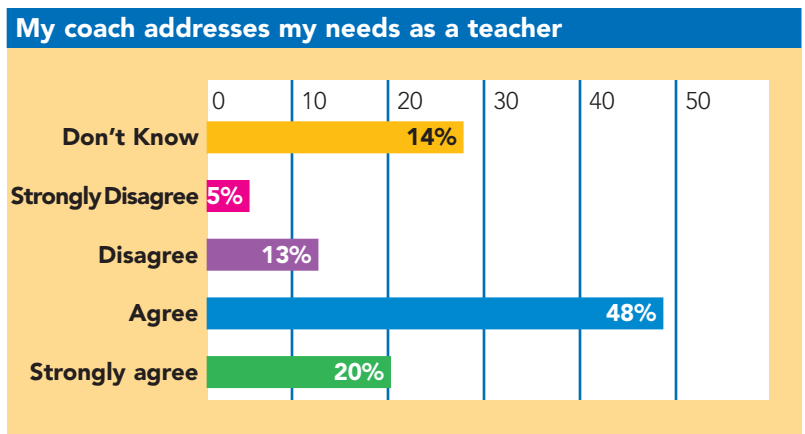


Figure 3
Teachers' Perceptions of Coaches

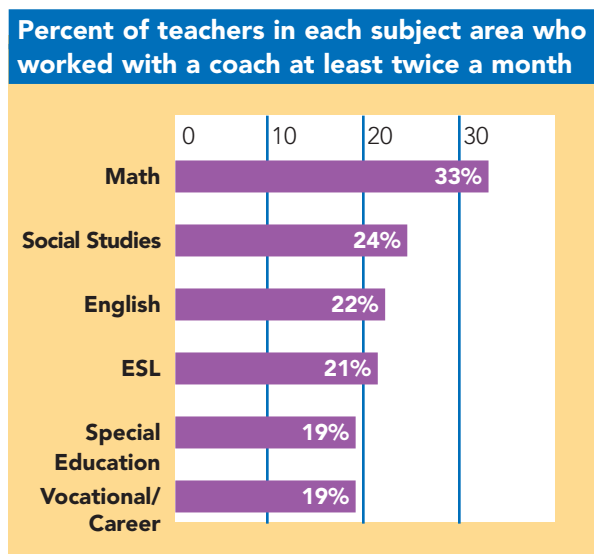


Finding 2: Year Two Teacher Survey results indicate that coaches are working one-on-one with teachers from a variety of subject areas and with teachers who work with special needs populations. They also indicate that math teachers are more likely to work with coaches at least twice a month than teachers in other subject areas.

PAHSCI coaches were trained to assist teachers across the content areas in applying literacy-rich instructional strategies to classrooms. Encouragingly, 74 percent of teachers responding to the Year Two Teacher Survey reported that their work with coaches was applicable to their content area and 68 percent agreed that coaches addressed their needs as a teacher. Further, 52 percent responded that their coach played a significant role in improving classroom practice.

Figure 4 shows the percentage of respondents in each of the subject areas who indicated that they had worked with a coach at least twice a month. It is interesting to note that math teachers were more likely to report working with a coach than their counterparts in other subject areas. The qualitative research indicated that many math teachers have been struggling with how to make routine use of literacy-rich activities in their math classes. It is heartening that math teachers are seeking help from coaches.

Figure 4



The Impact of Teacher Level of Participation in PAHSCI Activities on Classroom Practices and Student Engagement

We described PAHSCI’s reach in terms of the numbers of teachers involved in instructional coaching and other Initiative-related activities and the intensity of their involvement. Now, we turn our attention to the question of the depth of PAHSCI’s reach. Teachers with a deep understanding of the pedagogical principles of a reform are better able to respond to new demands and changing contexts in ways that are consistent with underlying principles of the reform, thus sustaining and intensifying the reform practices over time.¹³ Our analysis examines the degree to which teachers with high levels of involvement understand the PLN framework and can implement its strategies with rigor. While it might be expected that this would be the case, it cannot be assumed. It is essential to establish whether instructional coaching, at its best, reaps the desired results in classrooms—use of PLN’s research-based practices and active student engagement in learning. We draw on data from our classroom visits and interviews of teachers to explore this question.

For the qualitative research, to meet the criteria of high participation teachers needed to demonstrate three of the following five indicators:

- 1 working one-on-one with a coach;
- 2 attendance at PLN regional course;
- 3 attendance at school-based professional learning given by PAHSCI coaches, mentors, or administrators;
- 4 participation in study groups, departmental meetings, or additional examples of collegial learning opportunities connected to PAHSCI content; and
- 5 ongoing requests for coaching and PLN resources.

The research staff consulted with coaches and confirmed with teachers their level of partici-

¹³ (Coburn, 2003, 6)

Comparison of Integration Levels: The Multicultural Education Model and the PLN Framework Model

Levels of Integration of New Practices	Multicultural Model	PLN Framework (Selected Examples)
Contribution Level One	Focuses on heroes, holidays, and discrete cultural events	Use of isolated PLN framework strategies such as Do Nows , Word Splash with no connections to students' current knowledge or the body of the lesson.
Additive Level Two	Content, concepts, themes and perspectives are added to the curriculum without changing its structure	Use of process strategies such as small groups, pair share—without building students' capacity to learn together.
Transformation Level Three	The structure of the curriculum is changed to enable students to view concept, issues, events, and themes from the perspectives of diverse ethnic and cultural groups	Evidence of a coordinated instructional focus using the PLN framework to provide extended reading and writing activities, some review and check-in or assessment of learning. Students performing the tasks, problems, or activities.
Social Action Level Four	Includes all of the elements of the transformation approach but adds components that require students to make decisions and take actions related to the concept, issue, or problem studied in the unit	All of Level Three and evidence that students recognized the relevance of the lesson, students' reading, writing and talking was interrelated and students took risks and had opportunities to be successful.

pation in PAHSCI. Of the 52 ninth and tenth grade English and math teachers, 31 were rated as having high levels of participation; 21 with low levels.¹⁴

In collaboration with PLN facilitators and instructional coaches, RFA staff designed a classroom visit guide and teacher interview protocol. The guide and protocol provided data for assessing the lesson observed along three dimensions; use of PLN strategies, the facilitation of instruction, and student engagement. (See Appendix B for a fuller description of our observation methodology.)

Integrating the Research-Based Strategies of the PLN Framework

We characterize teachers' use of the PLN framework and its research-based strategies by drawing from the work of Banks and Banks on the integration of multicultural content into curriculum.¹⁵ We show progression from surface manifestations of the PLN framework to more in depth change through the integration

of deeper pedagogical principles.¹⁶ The chart above identifies four levels of integration and illustrates each level with selected examples from both multicultural models and the PLN framework.

PAHSCI teachers at the first and second levels generally applied a few isolated PLN strategies such as **Do Nows** at the opening or close of the lesson. However, at this lower level of integration, the tasks were not connected to the remainder of the lesson nor did they help focus students on the lesson content. In many cases, lessons were dominated by

¹⁴ Our sample was what is known as a purposeful sample. We did not seek representativeness because our purpose was not generalizability to an entire population. Instead, we sought to understand the impact of the Initiative operating at its highest level of intensity.

¹⁵ Banks, J. A. & Banks, C. A. M. (Eds.). (2005). *Multicultural Education: Issues and Perspectives* (5th ed.). Hoboken, NJ: Wiley.

¹⁶ (Coburn, 2003)

“teacher talk” or “busy work” that was not student-centered. Some teachers struggled with classroom management and were unable to engage students in learning tasks. In other words, they merely added, or layered upon previously existing classroom structures, a few new strategies, but their rationale for such additions were neither apparent, nor were they integrated throughout the lesson.

Teachers at the third and fourth level of implementation used the PLN framework strategies to build on and extend student knowledge and connect reading and writing opportunities to the lesson content. They modeled various types of responses and they invited students to replicate their modeling. Subsequently, students moved from individual conjectures, to sharing in pairs, to reporting to the whole group. Students were often invited to make meaning for themselves and others based on prior knowledge. To arrive at this higher level of integration, teachers reported that working with a coach was, as one teacher shared, “an integral part of the process... Working with my coach helped me to adapt the strategies and make them a good fit for my students.”

Finding 3: There were both English and math teachers who were implementing the PLN framework at a high level of rigor and success. However, overall, a greater percentage of English teachers than math teachers showed facility with PLN strategies.

As a group, both math and English teachers receiving level 4 ratings in one or all of the three dimensions were focused on having students share ideas and explanations, defend and justify solutions, solve challenging problems, and grapple with complex ideas. They frequently invited students to do the talking, had students interact with one another and successfully used key PLN strategies such as *Text Rendering*, *Expert Jigsaw*, and *Reviewing and Predicting* all the while connecting the activity to real world experiences. For example, in a ninth grade English class studying *Romeo and Juliet*, student directors were creating character portraits of the cast by listing

the qualities and skill sets they wanted in the actors they were interviewing for a live production of the play. In this example, students used their understanding of the elements of character and applied them to real situations. Significantly, students of varying ability levels were learning to interact with their peers—and learned to trust their peers’ input—thus extending the scope of learning beyond the “teacher as the holder of the right answer.” Students in classrooms of math teachers who were working at levels 3 and 4 of integration were encouraged to formulate conjectures, test them, and justify their solutions to each other in the context of an inquiry-oriented learning approach. Neumann’s study of student engagement emphasizes the importance of instructional tasks that “provide extrinsic rewards, intrinsic interest, sense of ownership, connection to the ‘real world,’ and fun.”¹⁷

Taken as a whole, the data highlights English teachers’ higher levels of implementation of PLN strategies. (See Table 1 on page 17) Only two math teachers with low levels of participation in PAHSCI activities were working at a level 4 of integration on at least one of the three dimensions of the classroom visit observations. By comparison, 9 math teachers, assessed as high program participants, were working at level 4 of integration on a minimum of one of the three dimensions. For English teachers, 11 low participation teachers were working at a 4 level and 14 high participation teachers were working at a 4 level in at least one dimension.

Our qualitative research during Year One of PAHSCI indicated that English and math teachers responded differently to the PLN framework—with math teachers generally reporting having more difficulty seeing the relevance of the framework to their subject matter and incorporating PLN strategies into their teaching. Several math teachers interviewed reported, “math is a different creature,” and “the math curriculum is not organized around reading and writing,” and “PLN is a much better fit for English and humanities

¹⁷ (Newmann, 1992)

teachers.” In addition, math teachers were twice as likely to report student resistance to writing. A few complained that PLN strategies took time away from the mandated math curriculum and from preparing students for the PSSA (the state test). In addition, math teachers were more likely to report that they “tried a few of the strategies” but did not continue to use them. However, some math teachers believed that having math students provide written explanations of test answers would contribute to improved comprehension in math and ultimately improved math scores on achievement tests.

As pointed out earlier, math teachers were more likely to be involved in more frequent one-on-one coaching. We suggest that math teachers reported more frequent sessions with coaches because they felt outside their “comfort zone” when using the PLN strategies. They wanted support and encouragement for their efforts. Hopefully, instructional coaching will make a difference in math classrooms across PAHSCI schools.

Both math and English teachers showed high quality use of PLN strategies, although English teachers were more likely to demonstrate competence. This evidence indicates that PAHSCI activities are shaping the kinds of lessons that teachers teach and, as some participants have put it, are “opening our minds” to conceiving new ways of teaching.

Finding 4: In interviews, high participating English and math teachers reported a broader range of benefits from their participation in PAHSCI.

In our interviews of teachers, both high participation and low participation teachers reported benefits from PAHSCI. However, high participation teachers in English and math cited a broader range of positive outcomes from PAHSCI. The most frequently cited benefits were:

- increased knowledge and skill,
- increased levels of student engagement, and
- improved quality high school teaching. (The teacher survey data collaborates this finding.)

Table 1

Distribution of Ratings for Teachers with High Levels of Participation in PAHSCI Activities

	Implementation of PLN Framework				Climate for Learning				Student Activities and Student Engagement			
	High Participation		Low Participation		High Participation		Low Participation		High Participation		Low Participation	
	English (N=13)	Math (N=18)	English (N=12)	Math (N=9)	English (N=13)	Math (N=18)	English (N=12)	Math (N=9)	English (N=13)	Math (N=18)	English (N=12)	Math (N=9)
Integration Level 1 (Low)	0%	0%	8%	11%	0%	0%	0%	22%	8%	0%	0%	22%
Integration Level 2	26%	44%	17%	56%	31%	28%	17%	56%	8%	22%	17%	56%
Integration Level 3	54%	44%	58%	22%	23%	56%	33%	11%	54%	56%	58%	11%
Integration Level 4 (High)	31%	11%	17%	0%	46%	17%	50%	11%	31%	22%	25%	11%

Increased Knowledge and Skill

Teachers' knowledge of students, academic content and overall pedagogy are central components of high quality teaching and learning. The critical work of teaching and learning is referred to as "the instructional core," which features three interdependent components:

- *teachers'* knowledge and skills,
- *students'* engagement in their own learning, and
- academically challenging *content*.

Cohen and Ball posit that teachers' intellectual and personal resources¹⁸ all influence classroom instruction.¹⁹ Students bring experiences, understandings, interests and potential for engagement to the classroom. At the same time, interactions among students are additional resources for student learning. The academic content and materials make up the third element of the instructional core. Instructional materials, as presented in text and other media, as well as the actual instructional tasks, problems, or projects students *do*, make up the curriculum.

PAHSCI's model of coaching and mentoring is directly aimed at the instructional core by providing professional development that immerses teachers in research-based instructional practices and provides them with ongoing, high quality classroom-based assistance. PAHSCI's theory of change is strongly supported by Cohen and Ball's claim that teachers play the pivotal role in strengthening the instructional core. They elaborate,

Because teachers mediate instruction, their interpretation of educational materials affects curriculum potential and use, and their

understanding of students affects students' opportunities to learn. As teachers learn new things about content and students, they notice different things about both, and are able to use them differently. Change in students, teachers, or materials has the potential to change the relations of teachers, students, and materials, and hence affect instructional capacity. But change in teachers has unique potential, because teachers mediate all relationships within instruction.²⁰

Over 50 percent of teachers we observed and interviewed indicated that PAHSCI gave them opportunities to learn and practice new ideas and strategies. Both math and English, high and low participation teachers reported that the Initiative had influenced them to de-emphasize "straight lecture" as the dominant format of their classroom teaching. Teachers reported increased confidence in their own teaching practice and more effective use of their time. They also reported more frequent collaboration with other teachers and explained that the PLN framework provided a common language for talking about literacy-based strategies across English and math.

Increased Levels of Student Engagement

Students like it. They like having choice in reading. They like breaking up into smaller groups. They like a lot of the strategies more.

When I first came in as a teacher, I was like, "Okay, I'm going to teach this lesson. This is what I have to get the students to know." So, it was more thinking, this is what I'm going to give to them. And now I think it's more of a, "Well, now I have to listen more." So I think that is making it more of a two-way street. And that it isn't my show; that has been helpful.

—9th Grade English Teacher

Both English and math teachers reported increases in student engagement through PAHSCI, but English teachers were much more likely to report this. Participation level made little difference in English teachers'

¹⁸ Their conceptions of knowledge, understanding of content, flexibility in understanding and tapping into students' prior knowledge, and their repertoire of strategies to represent and extend knowledge, and to create classroom environments conducive to quality teaching and learning

¹⁹ Ball, D. L. & Cohen, D. K. (2004). Reform by the Book: What is — or might be — the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher*, 25(9), 6-8.

²⁰ (Ball & Cohen, 2004, 6-8)



perceptions, with 75 percent of high and 73 percent of low participation English teachers reporting improved student engagement. However, high participation math teachers were more than twice as likely as their low participation colleagues to report increased student engagement through PAHSCI with 47 percent of high participation math teachers affirming this.

Importantly, high participation English and math teachers said that students were writing more

and their writing was more reflective. In addition, teachers found that with daily opportunities to write, writing came more easily to students. Teachers described enhanced student initiative, student ownership of their learning, and student confidence. Observing the relevance of student-to-student interactions, one teacher shared, “I’ve learned that students actually learn better from other students. They seem to get it quicker.” High participation math teachers who had implemented *Read alouds and read alongs* reported an overall improvement in student comprehension of the math computations needed to solve a problem. High and low participation teachers cited a strong belief that increased engagement leads to increased student understanding and learning. Both English and math teachers noted that increased student engagement helped them as teachers more accurately assess what students were learning, what they understood, and what they did not.

Improved Quality High School Teaching

Sometimes you’re looking at it, the curriculum, and you just don’t see another way to teach it and you just need another colleague or someone, to ask, “Have you considered another way?” “No I haven’t, but I’m thinking about it.”

Are students learning what I want them to learn, academically challenging content?

And that really is the question. That’s all that I’m concerned about.

High participation English and some high participation math teachers reported that they were taking academically challenging content and chunking it in new and more interesting ways. Several reported an increase in their expectation of students’ ability to handle difficult subject matter. One English teacher tried using the *I-Search Paper*, a strategy she learned from the PLN course along with additional insights from her coach. She shared,

This was the first time that I implemented something like that. Because I think my 9th graders, they really need to have a foundation for research skills, and that paper enabled them to get on the computer, get to the library, look for books, and touch on sites that maybe were useful, maybe were not, but they were still able to get there and to utilize those skills.

For one teacher, both the quality of her teaching and her personal enjoyment from teaching increased. She shared,

I personally see teaching as more enjoyable. I’m actually teaching less and the kids are learning more—from each other and their own discoveries.

A few teachers worried that the PLN framework, while improving student engagement, might not meet the needs of their most academically driven students who expected a highly competitive environment. One said,

I would like to have (and I will in the summer) more time to sit down and process all the information and look at my curriculum and see where I can apply it, and see where it would work well. And I look forward to working with [instructional coach] to help sort some of this out.

Although some teachers were reluctant to directly confront the issue of equity in teaching racially and academically diverse learners, a few high participation (math and English) teachers reported that the use of the PLN framework helped them to teach more rigorous

content to diverse learners. They explained that they are improving their quality of teaching because they were focusing on experiences from their students' world (especially when the teacher is not the same race or class as their students) and better connecting what students already knew to academic content.

Low participation teachers and a smaller percentage of high participation teachers frequently reported having insufficient time to implement the PLN strategies in the way they would like. Specifically, teachers suggested that the periods were too short. In addition, several reported needing more time to reflect on the instructional strategies they were learning and to work with coaches. Some found that integrating the strategies into their lessons takes more time than using traditional teaching methods.

More than English teachers, math teachers reported that they perceived a trade-off between covering content at an acceptable pace and integrating more writing into their math lessons. They were more likely to report that they were unsure how to incorporate the strategies and it took time they did not have to reflect on how to change "how math is taught. You know, the math curriculum doesn't lend itself to enough writing. You just kind of have to see where you can squeeze it in." Again, these struggles reported by math teachers point to the important role of working with a coach one-on-one and it is promising that math teachers report the highest incidence of working one-on-one with a coach.

A few teachers report that coaches have helped them with classroom management. However, poor classroom management is an obstacle to using the PLN strategies for some teachers and inhibits them from implementing the framework at higher levels. Some teachers report that the PLN strategies contributed to their classroom management woes, i.e., students become too talkative and rowdy; whereas others report that orchestrating a more literacy-rich environment has improved student engagement and considerably helped their management issues.

Conclusion

Showers and Joyce found that teachers involved in a coaching relationship practiced new skills and strategies more frequently and applied them more appropriately than did teachers who worked alone²¹ and so understanding more about the reach of instructional coaches is important.

RFA's observations, interviews, document analysis of lessons and artifacts and quantitative analysis of the teacher survey data allow us to report that English and math teachers with high participation levels in PAHSCI activities are changing their classroom practices in positive, measurable ways. As argued earlier, teachers' enhanced knowledge and understanding has unique potential, because teachers mediate all relationships within instruction and the support of one-on-one coaching focuses and enhances the potential to change classroom practice.

We are reminded that during our preparation to visit PAHSCI classrooms, PLN facilitators mapped out key indicators of changing classroom practice that we should be able to observe in Year Two. In high participating, high implementation classrooms, writing was woven throughout the lesson, this was reflective writing, not just copying from a text. Teachers in these classrooms confirmed that this was a shift from previous practice. We saw teachers using scaffolding strategies and addressing the range of ability levels among their students by using more strategic grouping, teaching and assessing, and re-teaching and most important, engaging students in their own learning.

Finally, PAHSCI aims to encourage all teachers to "try something new and improved" and though not without challenges and struggles, many of the teachers we visited and interviewed reported that what we observed represented a shift in their thinking and practice. The support of an instructional coach to help refine their practice is making a difference and as a result, teachers are changing classroom practice and their students are benefiting.

²¹ (Showers and Joyce, 1996)

Section 3

The Role of Coaching in Changing Instruction

The coaching initiative has been amazing. Not just the training. Not just the new approaches to reading, and writing, which were great, but also the coaching—having a classroom teacher who we all know, who we all understand what qualifications they bring, having them...just the word itself, having them to coach you through this.

—English Teacher

I've told my coach several times, "Wow, I wish I knew last year what I know now." The coaches have been wonderful. I go to them a lot. I think without them the job would be a lot more difficult.

—Math Teacher

At the heart of PAHSCI are coaches providing ongoing instructional guidance to teachers. Hasbrouck and Denton describe the work of coaching as “job-embedded, individualized, and sustained professional development to teachers.”²² This section will discuss how instructional coaching, focused on implementation of the PLN framework, contributes to changes in teachers’ instructional practice. Drawing from mentor and coach questionnaire data, interviews and surveys of teachers, and interviews and surveys of coaches, we will describe how coaches have guided teachers to deeper levels of implementation of the PLN framework.

²² Hasbrouck, J. & Denton, C. A. (2007, April). Student-Focused Coaching: A Model for Reading Coaches. *The Reading Teacher*, 60(7), 690.

Factors Leading to Teachers’ Use of PLN’s Research-based Strategies

Based on coach survey data, coach interviews, teacher interviews, and teacher survey data, our research identified four major factors that lead to a teacher’s use of PLN’s research-based strategies:

- 1 Attendance at a PLN course followed up by encouragement and guidance from an instructional coach;
- 2 One-on-one work with a coach;
- 3 Work with a coach whose professional identity was closely aligned with PAHSCI goals and who had a clear understanding of the coach role; and
- 4 Use of the Before-During-After Consultation Cycle.

Table 2

Professional Experience of PAHSCI Coaches.

Most coaches had, or were in the process of obtaining, a graduate degree.	Overall, coaches had many years of teaching experience.	Coaches also attended training sessions to equip them for the work of coaching.
55% Master’s degree	33% 10-20 years	73% PLN 1
6% Doctorate degree	27% 21-30 years	76% PLN 2
25% Enrolled in a graduate program	12% 31-35 years	72% Year One networking sessions
		74% Year Two networking sessions

In total, **61%** of coaches participated in all these training opportunities.

Coaching and the PLN Course Create Momentum for Instructional Change

The first time I did one of the strategies it didn't go as well. I learned it at PLN and I tried it immediately. There were things I saw that I had to work out. Then I saw one of the coaches and I said, 'I'm overwhelmed. I don't know where to start. Can you give me some ideas?' And they've always been there for me.

—Math Teacher

Finding 1: Teachers' attendance at a PLN course followed up by guidance from a school-based instructional coach increases the chances that teachers will use the research-based practices of the PLN framework.

Our qualitative data – observations and interviews with 52 teachers – suggest that teachers are more likely to change their instructional practice when they attend a PLN course and receive support from an instructional coach. Further, they are more likely to have a greater understanding of the principles of the PLN framework and be able to implement its strategies. According to Rogers the decision to adopt or reject an innovation is influenced by the actor's *knowledge* of the innovation and *persuasion* to use the innovation.²³ Teachers need to acquire three types of *knowledge* about an innovation: 1) awareness of the innovation; 2) procedural knowledge of the innovation; and 3) knowledge of the principles underlying the innovation. Research on professional development has indicated that awareness and procedural knowledge are the most easily acquired knowledge; internalizing an overall instructional framework and its principles is much more difficult to achieve, but necessary to sustaining the innovation.²⁴ Persuasion is essential because it moves the teacher from

merely contemplating the benefits to embracing them; and from abstract knowledge to concrete use. Knowledge and persuasion together are necessary for adoption of an innovation.

Analysis of teacher interviews indicated that instructional change was particularly powerful when teachers had acquired knowledge of the PLN framework through taking the PLN course and had worked with a coach that provided the persuasion necessary to actualize that knowledge. Because of their knowledge of teachers' backgrounds, their students, and their classrooms, coaches were able to help teachers customize what they had learned from the course. This assistance with customization offered teachers one more reason to give PLN activities a try. Essentially, coaches helped teachers transform their abstract knowledge of PLN strategies into something concrete, thus greatly increasing the likelihood of using those strategies.

Teachers reported that they frequently encountered challenges in their first attempt to implement PLN strategies. Such challenges, according to Rogers, often lead to discontinuance of use of the strategies. However, coaches were instrumental in helping teachers get past initial challenges in implementing PLN strategies by giving teachers ideas for adapting the strategies further, and encouraging them to keep working at it “a little bit more.”

On the survey, coaches reported that, in general,²⁵ the strategies most frequently implemented by teachers include: ***Do Now***, ***Reflective Writing***, and ***Transacting with Text***. (Frequency of use was defined as using the strategy at least once a week.) The least frequently used strategies were ***Jigsaw***, and ***On-Demand Prompts***. Figure 5 provides a description of these PLN strategies.

²³ Rogers, E. M. (2003). *Diffusion of Innovations*. (5th ed.) New York: The Free Press.

²⁴ Franke, M. L., Carpenter, T. P., Levi, L. W., & Fennema, E. (1998, April). *Teachers as Learners: Developing understanding through children's thinking*. Presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

²⁵ No distinction is made here between teachers who worked one-on-one with a coach, and those who did not.

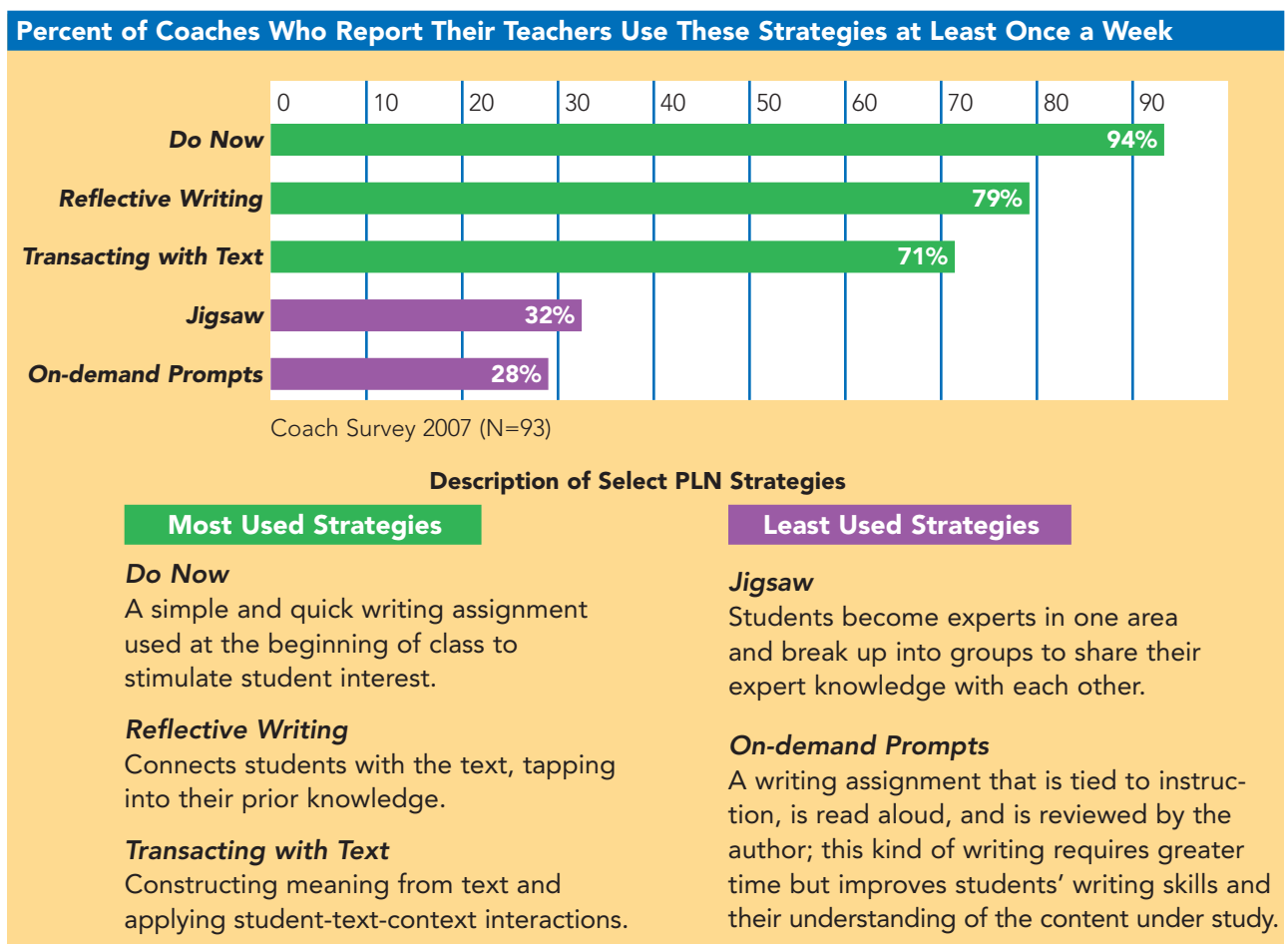
Momentum for instructional change was generated as coaches provided follow-up, customization of the PLN strategies, and encouragement to teachers who attended the PLN course.

Finding 2: One-on-one work with a coach positively influenced teachers' use of the PLN framework and its research-based strategies.

According to teacher survey data, teachers who worked one-on-one with a coach were more likely to use PLN strategies. Teachers also reported this in our interviews with them.

This is the case whether we are looking at the most frequently used strategies or the least frequently used strategies.) As reported earlier, 72 percent of teachers who were surveyed reported working one-on-one with a coach at least once a semester (20 percent twice a month, 16 percent once a month, 16 percent twice a semester, 20 percent once a semester), while 28 percent report never working one-on-one with a coach. Thus, one effective way that coaches can help teachers implement PLN strategies is by working with them on a one-on-one basis.

Figure 5
Coaches Report: Frequency of Use of PLN Strategies



Strong Professional Identity and Role Clarity Positively Influence the Impact of Coaches

Finding 3: Teachers are more likely to use PLN strategies if they work with a coach who has a strong professional identity as a coach and a clear understanding of the coach role.

In order to understand this finding, we turn to a brief description of the coach survey model. The following factors determined a coach's professional identity (followed by the percentage of coaches who met that individual criterion):

1 Knowledge of their role as a coach, knowledge of the PLN framework, and knowledge of content	88%
2 Active participation in various school-based meetings	75%
3 Active participation in PAHSCI trainings	65%
4 Self-rated effectiveness in improving classroom practice and student achievement	80%

Coaches who checked 3 out of 4 of these indicators were viewed as having a professional identity that was closely linked to PAHSCI. Coaches who checked two or fewer of these indicators were viewed as having a professional identity that was more peripheral to PAHSCI. Using these indicators, 73 percent of coaches were classified as having a professional identity tied closely to PAHSCI.

Analysis of the 2007 coach survey data showed that a coach's professional identity is associated with more frequent implementation of the PLN framework by the teachers in his/her school. In the model, a coach's professional identity is both positively correlated (.362) with teachers' implementation of the PLN framework (as reported by coaches), and is statistically significant ($p = .003$).

This means that the degree to which a coach's professional identity is linked to PAHSCI affects how frequently teachers use PLN strategies. Thus, the professional identity of a coach matters a great deal in how frequently teachers implement the PLN framework. In this finding, we see further evidence that the PAHSCI theory of change is working.

When coaches clearly understood their roles, teachers at their schools more frequently used PLN strategies. In the first year, coaches began forming consultative relationships with teachers despite the fact that they "struggled mightily with the ambiguity of their new assignment."²⁶ According to *Promising InRoads* and *Learning to Change*, it is common for instructional coaches to be ambiguous about their role because of the numerous and varied needs in schools, and the paucity of research to guide the work of coaches.²⁷

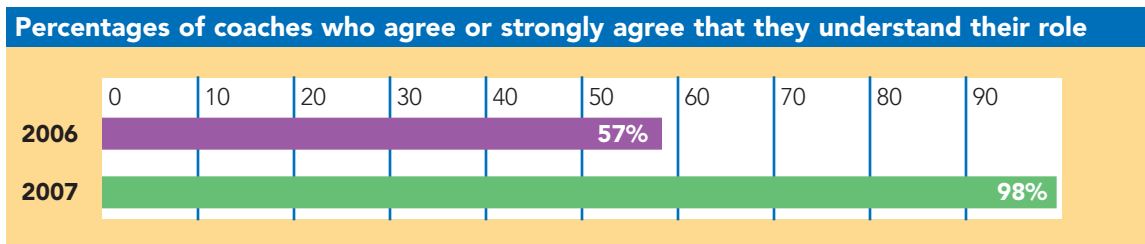
PAHSCI coaches have made great strides in defining and clarifying their role from Year One to Year Two. In 2006, only 57 percent of coaches agreed or strongly agreed that they understood their role as a coach. In contrast, this year (2007), 98 percent of coaches agreed or strongly agreed that they understood their role. Figure 6 illustrates how far coaches have come in understanding their role.

Using 2007 coach survey data, we found that 94 percent of coaches who agreed or strongly agreed that they understood their role as a coach, also agreed or strongly agreed that they played an important role in improving classroom instruction. Because professional identity is tied to coaches' impacts on teacher practice and coaches' understanding of their role is a component of professional identity, this increase is a positive sign.

²⁶ (Franke et al., 1998, 21)

²⁷ Brown, D., Reumann-Moore, R. J., Hugh, R., du Plessis, P., & Christman, J. B. (2006, September 1). *Promising InRoads: Year One of the Pennsylvania High School Coaching Initiative*. Philadelphia: Research for Action.; Brown, C. J., Stroh, H. R., Fouts, J. T., & Baker, D. B. (2005, February). *Learning to Change: School Coaching for Systemic Reform*. Mill Creek, WA: Fouts & Associates, L.L.C.

Figure 6



As this quotation from a math coach illustrates, coaches' clear understanding of their role is critical to how effective they can be in their work with teachers.

Originally, I misunderstood my charge to implement math literacy classrooms. I tried to force writing for writing's sake. Now I understand better what it means to be math literate. As a result, teachers understand better what's expected of them.

– Math Coach

“If the institutional role of the coach is ambiguous, then [coaches] run the risk of becoming irrelevant to the real work of the school.”²⁸ With a better understanding of their role, PAHSCI coaches were able to sharpen their focus on helping teachers customize implementation of the PLN framework.

Use of the Before-During-After Consultation Cycle

Finding 4: Our data suggest that teachers are more likely to adopt PLN strategies when coaches use the Before-During-After (BDA) Consultation Cycle.

Coaches often use the BDA Consultation Cycle as a way of structuring their work with teachers. In the teacher-coach BDA Consultation Cycle, the “Before” segment involves planning with a teacher; the “During” segment involves visiting the classroom and observing the lesson being taught and, in some cases,

helping to teach the lesson; and the “After” segment is when coaches debrief with teachers and help them reflect on the lesson taught. According to our data, 73 percent of the teachers who were interviewed described going through some segment of the BDA Consultation Cycle with their coach.

In the 2007 coach survey, coaches were asked to respond to a list of potential obstacles to their work as a coach. Coaches reported that their greatest obstacle was truncated BDAs, i.e., committing to some portion of the BDA Consultation Cycle, but not the entire cycle, with 77 percent of coaches agreeing or strongly agreeing with the statement.

When teachers were interviewed, the descriptions of their consultation with coaches mostly fell into the “Before” and “During” categories. Teachers least often mentioned going through the “After” segment with a coach. But as the quotation below shows, the “After” portion of the cycle is the time when teachers reflect upon their practice, and it is in that period of reflection that seeds of instructional change are planted.

After the lesson, I'll ask him, 'How do you feel that it went? What would you change if you had anything to change?' And so we have that rapport and he listens. He then internalizes that, and I will see him change. Then the next time I visit his classroom, I do see that change.

²⁸ International Reading Association (2006). *Standards for Middle and High School Literacy Coaches*. Newark, DE: Author, 45.



The 2007 coach survey reveals one potential reason for truncated BDA Consultation Cycles. Seventy-four percent of coaches reported that lack of teacher planning time built into the school day was a challenge to their work. This highlights the point that school supports must be in place in order for instructional coaching to be successful.

As discussed in section two, implementation of the PLN framework happens on different levels. Implementation ranges from “level one”—using strategies in isolation and without clear goals for how and why to use the strategies—to “level four”—having a clear and well-articulated rationale for which strategies to use and how to use them. Our interview and observation data indicate that coaches were effective in guiding teachers to deeper levels of implementation when they used the BDA Consultation Cycle in their work with teachers.

Conclusion

Teachers are changing their instructional practices, and coaches are playing a large part in that change process. Strong momentum for instructional change was produced when coaches followed up with teachers who attended PLN courses. In this way, coaches helped teachers apply and make concrete what they learned in the course. In addition, other factors that contributed to a teacher’s implementation of the PLN framework included one-on-one work with a coach, coaches’ clear understanding of their role, and coaches’ strong professional identity. Coaches used the BDA Consultation Cycle to guide teachers to deeper levels of implementation; however, the “After” portion of the cycle was most often sacrificed.

Section 4

PAHSCI Sites for Learning, Leadership Development, and Strong Professional Community

Mr. Able, a veteran math teacher, describes instructional changes he and his colleagues have made because of PAHSCI,

I know we're doing a lot more literacy strategies, especially for me as a math teacher. I didn't do a whole lot of writing or reading or anything, and that has really kind of opened my eyes to realize that we're all reading teachers. . . In order to get the best results out of the content area, we have to all work towards literacy strategies, implementing those into our classrooms.

Mr. Able took the PLN 1 regional course in Year Two; he worked with the math coach on several occasions, including team teaching lessons in his classroom. He and his coach have developed rapport and Mr. Able feels free to approach his coach to problem-solve, share, and plan. He has a colleague in the adjacent classroom who shares his enthusiasm for the profession and they "try to go to every professional development activity they can."

In addition, Mr. Able's school is offering tutorial classes for ninth graders in math and English. These classes are team taught and Mr. Able is participating in the program. As the only one on his team who has taken a PLN course, Mr. Able shares PLN strategies, especially the variety of techniques for incorporating writing into math lessons. He explained,

I kind of take charge. When the coach assigned me, she assigned me with two math teachers who were not PLN trained, so that hopefully by being in there with me, and working with the students, and me modeling it, they will take it back to their classrooms.

In this vignette, we see how PAHSCI both benefits from, and contributes to, a collaborative learning environment that supports teachers' professional growth and movement into leadership roles—two important intermediate outcomes that PAHSCI is trying to positively affect. Mr. Able has been a part of numerous PAHSCI-related sites of learning, both within the school and outside. Through the regional course, he learns about the PLN framework and its strategies with educators from his own and other districts. He has the support of a coach to help him translate this learning into action in the classroom. In addition, he has colleagues who are also engaged in learning about the PLN framework and he is taking on a leadership role in sharing his experiences with them. He is articulate in describing his own change process, pointing to significant shifts in his beliefs about teaching

math and about the role of high school teachers in relation to literacy. His school's tutorial program creates an environment that encourages teacher collaboration. Mr. Able seizes that opportunity to step up to leadership and to work toward building a common language of instruction that draws from the PLN framework. Mr. Able's professional community is strong because: learning is collaborative and the faculty is building shared knowledge; coaches and teachers have time and opportunity to work together; there are learning opportunities inside and outside of school; and there are leadership opportunities for teachers.

PAHSCI's program design explicitly creates structures and opportunities for building leadership at the school and district levels and developing professional community within and across schools. Coach-teacher interactions take place within a larger context of professional

learning. For PAHSCI to scale up, i.e., move beyond individual classrooms to effect broader and deeper change within schools and districts, it must influence school and district culture in ways that will support PAHSCI goals of using instructional coaching to change teaching and learning to impact student engagement and achievement. This section will examine the major sites of learning within PAHSCI, as well as how these sites work together to support change.

As we have discussed, research indicates the pivotal role professional community can play in facilitating school change. “In high performing schools, a nurturing professional community seems to be the ‘container’ that holds the culture.”²⁹ Milbrey McLaughlin found that “successful teachers, without exception, single out their professional community as the source of their professional motivation, the reason they don’t burn out in the face of exceedingly demanding situations, and the foundation of their ability to adapt to today’s new students.”³⁰ School leadership and professional community are both important elements of a school’s instructional capacity³¹ and must be nurtured to support changes in instructional capacity. Developing leaders—teacher leaders, coaches, administrators—and strengthening the school environment for ongoing professional learning are two of the surest ways to sustain the goals of PAHSCI, long after the Initiative has ended.

Professional community is most commonly talked about as something that happens *within* schools. PAHSCI seeks to foster professional community at multiple levels—within the participating schools but also within districts and across participating schools and districts within the state. PAHSCI fosters professional

community within districts both by linking central office staff to school-based communities in meaningful ways focused on instruction *and*, where two or more schools within a district are participating, by creating the potential for meaningful professional learning networks across those schools. Cross-school and cross-district PAHSCI networking sessions and courses bring together variously positioned participants for shared learning. These different sites of learning reinforce each other and help create the potential for deeper learning. Opportunities for participants to learn as individuals, as well as collaboratively within schools, districts, and across the state, are central to PAHSCI’s design.

Our findings indicate that professional communities focused on teaching and learning are growing stronger in many PAHSCI schools. In addition, these communities and networks of educators are extending across schools within districts and across districts, creating a context for supporting deep learning and sustainable change. These layers of learning opportunities, in concert with support from coaches, mentors and administrators, are supporting the leadership development of variously positioned participants. At the same time, there are continuing challenges to creating deep, meaningful professional communities within and across schools.

Learning and Professional Community within the School

PAHSCI seeks to create multiple sites of learning within a school. This includes individual, small group, department-wide and whole school settings for learning. Coaches and administrators, with the support of mentors, play important roles in making this work possible. The Pennsylvania Collaborative Coaching Board underlined the importance of coaches’ work related to leadership and professional community in their compilation of seven skills of coaching that all coaches need. First on the list is “skills of creating a community of learners/thinkers or a professional learning community” and second is “skills of leadership and school-wide planning.”

The following vignette tells the story of what can happen when PAHSCI teachers are at schools

²⁹ Arbuckle, M. (2000). Triangle of Design, Circle of Culture. In P. Senge, N. Cambron-McCabe, T. Lucas, B. Smith, J. Dutton, & A. Kleiner, (Eds.), *Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education*. New York: Doubleday, 326.

³⁰ McLaughlin, M. W. & Talbert, J. E. (2001). *Professional Communities and the Work of High School Teaching*. Chicago: University of Chicago Press.

³¹ (McLaughlin & Talbert, 2001)

with weak professional community; it provides a contrasting image to the earlier vignette.

One experienced English teacher we visited taught a high engagement class characterized by a clear instructional focus, extended reading and writing activities, well-developed classroom processes, and scaffolding to help struggling learners. Our RFA observer rated her classroom pedagogy and facilitation of learning as excellent and student engagement in her classroom as very high. However, school coaches rated her participation in PAHSCI as low. She could not give herself a self-assessment rating for PLN understanding or implementation due to lack of exposure. This teacher seemed a prime candidate to implement and even become a leader in PAHSCI. However, she had not participated in the regional training and noted that other teachers did not share what they learned at the trainings. She thought she might have heard coaches talk about PLN at one staff meeting that year, but she wasn't familiar with any PLN strategies. She planned to start implementing *literature circles* soon after our visit but was not aware that these were a strategy PLN promotes and did not know whether anyone else in the school used them.

This story emphasizes the opportunities for learning (this teacher's and others') and developing deeper knowledge that are lost when teachers work in isolation. In a setting with a weak culture of collaboration, it is likely that teachers whose work is already very congruent with PAHSCI will not be aware of the program. There are not opportunities for capitalizing on such teachers' knowledge and skills, nor the ability to use them in leadership roles. The weak professional community also impedes cultivating broad or deep implementation of the PLN framework.

Finding 1: In many schools, PAHSCI is supporting development of professional communities by changing professional development, creating new school-based leaders, and creating and broadening networks of support and learning within participating schools.

Administrators' Perceptions of PAHSCI's Influence Overall, in interviews, surveys and questionnaires, teachers, coaches, mentors and administrators described increased collaboration, greater agreement on beliefs about instruction, and deeper engagement in professional learning among educators in their context. One administrator said, "Teachers are having many more professional conversations regarding best practice, lessons, and student achievement." A large majority (83 percent) of administrators responding to the survey indicated that instructional coaching and the PLN framework were significantly changing the focus of professional development at their school in 2006-2007. Their schools and districts are instituting concrete structural changes to support the goals of PAHSCI. Examples included:

- Instituting walkthroughs. Seventy-nine percent of those surveyed say they conduct PAHSCI-related classroom walkthroughs daily, weekly, or monthly.
- Changes in professional development structures, including new times or modes for professional development. For example, implementing before school study groups, use of substitutes for ongoing professional development, changing date and time of department meetings to allow for group planning for the following week, addressing data in professional development.

In addition, administrators noted that they have made changes to curricula and school schedules because of their involvement with PAHSCI, e.g., extended time for reading and math; PSSA test preparation class; use of novels—not just anthologies that use novel excerpts—in English literature classes; revised lesson plan design; addition of Sustained Silent Reading (SSR).

Coaches, mentors, and administrators all agreed that the number of PAHSCI-related professional development sessions that coaches led increased significantly from Year One to Year Two. Eighty percent of coaches and

administrators said coaches provided more professional development this year in comparison to Year One. There was also an increase in the number of schools that provided coach-led professional development on the PLN framework to every teacher in the school.

Coaches' provision of, and teacher participation in, study groups has increased dramatically in Year Two. In Year Two of PAHSCI, 77 percent of coaches report conducting at least six study groups, compared to only 26 percent in Year One. Ninety-two percent of administrators surveyed said study groups are a form of professional learning available for teachers in their school. Forty-one percent of teachers surveyed say they have attended a study group. The most common study group sessions across the participating schools were; PLN I and II Support Groups, Student Engagement Approaches, Academic Literacy, and 4Sight/PSSA Support Approaches.

As Figure 7 indicates, teachers recognized an increase in collaborative efforts and professional learning at their schools as well as the coaches' role in making this happen.

Both coaches and teachers identify other coaches, teachers, and mentors as important to their own professional development (see below). Coaches and teachers rely on each other for learning and support. Such roles are greatly facilitated by strong professional community.

Teacher Perceptions of Support

Teachers have supported, guided and provided direction in PAHSCI.	88%
Coaches have supported, guided and provided direction in PAHSCI.	91%
Mentors have supported, guided, and provided direction in PAHSCI	75%

% of teachers agreeing or strongly agreeing (N=1230)

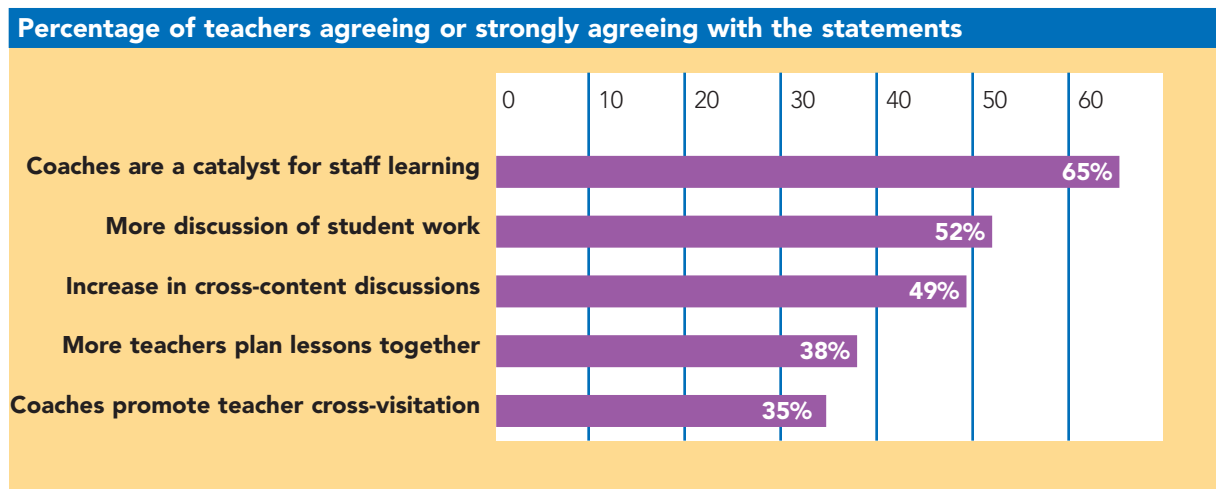
Coach Perceptions of Support

Teachers have been important to my development as a coach.	94%
My school based coaching team has been important to my development as a coach.	89%
The monthly visits from Foundations mentors have been important to my development as a coach.	82%

% of coaches agreeing or strongly agreeing (N=93)

Figure 7

Teachers' Perceptions of PAHSCI's Influence on Creating Professional Community at their School



One concrete manifestation of increased professional community and collaboration is that 63 percent of administrators surveyed noted increased inter-class visitation among staff. One administrator said, “The coach’s office has become a hub for professional development. The setting encourages teacher participation and supports previous professional development with relevant resources.” During our site visits, we learned of teachers who took PLN courses and are now taking leadership roles with their peers (thus extending the reach of PAHSCI coaches) in various school-based professional development opportunities, such as departmental meetings and team teaching meetings.

Finding 2: Coaches and teachers with higher participation in PAHSCI were more likely to report strong professional community at their schools. High participation teachers were also more likely to emphasize the importance of school-wide implementation of PLN.

Both coach and teacher survey data support PAHSCI’s positive impact on professional community. According to the coach survey data, there were strong and statistically significant correlations between coaches whose professional identity is strongly linked to PAHSCI and (1) more robust teacher collaboration (.289), (2) teacher participation in professional learning opportunities (.479), and (3) professional community (.502).³² Similarly, teacher survey data shows strong and statistically significant correlations between PAHSCI participation and the intermediate outcome of professional community. Teachers with high participation levels in PAHSCI are more likely to report strong collaborative environments (.306).³³ It is possible that teachers with high participation in PAHSCI see the value of, and seek out, collaborative professional community or that they are involved in creating it so are more aware of it than low participation teachers.

In interviews, high participation teachers were especially likely to recognize the importance of school-wide implementation of PLN—and of the problems caused by lack of this. Teachers identified this school-wide investment in PAHSCI as important because wider implementation helps develop a common language and shared approach for teachers and students and because they believed there is greater impact on student learning when students use the strategies in multiple classrooms.

It may be that a high degree of classroom implementation, along with participation in Initiative learning opportunities, supports teachers in looking beyond their individual classrooms to the changes needed across a school or district. Coburn conceptualizes four interrelated dimensions necessary for scaling up educational reforms. These four dimensions are depth, sustainability, spread, and shift in reform ownership.³⁴ These high participating teachers are articulating the importance of the fourth dimension and that broad involvement in, and ownership of, PAHSCI is important to its impact.

From two different vantage points—a school with strong professional community and wide PLN implementation and a school lacking both—two high participation teachers describe the advantages of, and need for, school-wide implementation.

A teacher from a school with strong professional community:

And then, with the PLN, it was really effective for me, because I see the consistency. The kids are seeing [PLN strategies], in ninth grade, tenth grade, now that it’s in its second year, they’re seeing it in math, in science, in social studies. They’re getting a common language of assignments.... It seems like a faster-paced situation, sometimes. I guess when all the kids see a large percentage of teachers doing things in a

³² All three correlations are significant at the .01 level.

³³ This correlation is significant at the .01 level.

³⁴ (Coburn, 2003).

certain way, and they see it working, they can relate to that. At our school, the teachers I worked with in PLN, we discussed how we needed to talk to these kids, and explain to them what we're, doing. And they [the students] like it. They like having choice in reading. They like breaking up into smaller groups. They like a lot of the strategies more. Formal, standard approaches just weren't working.

A teacher from a school with weak professional community:

I think I've used some of the lessons in my class and I think that it helps with classroom participation, especially. For the whole school, I don't know. It's hard because I don't communicate with everybody throughout the whole school very often. But one of my friends who has also taken the course uses the PLN lessons a lot and she also likes them; she sees more classroom participation as well. When I was taking the PLN class, the facilitator said that some of the schools that were in trouble at first, later became these really literate schools, but in those schools he said that everybody was working together. And I said, to him, 'I can't even imagine that happening here.' I think it [active reading and focus on reading comprehension with PLN strategies] has to be a habit in all of their classes. That could help if they could take those skills themselves and apply them when they're actually taking the PSSAs. ...I wish more teachers believed that it does improve their achievement on standardized tests because then I think that it would be so helpful.

Finding 3: While the data reveals much cause for hope about the development and strengthening of learning-focused professional communities at PAHSCI schools, it also underlines challenges to building and sustaining professional community.

Despite the positive data in this section, only 55 percent of teachers responding to the survey agreed that, at their school, “The staff and administration have established a high level of professional collegiality and trust.” Key challenges include:

Development of shared beliefs and attitudes

When Coburn identifies depth as one of the four

dimensions of moving reforms to scale, she means in part the importance of building shared beliefs among educators. “Beliefs” refers to teachers’ underlying assumptions about how students learn, the nature of subject matter, and expectations for students or what constitutes effective instruction. Many external reform initiatives promote a view of teaching and learning that challenges conventional beliefs about one or more of these dimensions.”³⁵ Changed attitudes and beliefs aligned with a reform initiative support efforts toward sustainability. Beliefs both take time to shift and are also key to creating lasting change.

Not surprisingly, just two years into the Initiative, the data shows mixed results in terms of changing attitudes and beliefs. One goal of PAHSCI is to create school cultures where the staff believes that teaching literacy is the responsibility of all high school teachers. Responses to Year Two surveys indicated that this key belief is almost unanimously shared by coaches (98 percent agreed). A significant percentage of teachers (72 percent), but only half of administrators (54 percent), agreed with this statement. In interviews, some teachers shared stories of changing beliefs, however there is clearly a gap between the belief PAHSCI seeks to promote and many participants’ beliefs. PAHSCI is also structured on the premise of high expectations for all students and here there is also a gap. Sixty-nine percent of coaches say that teachers’ low expectations for students are an obstacle to their work.

The data indicate that in Year Two, both **teacher resistance and lack of administrative support** were not such significant factors as in Year One, but both remain challenges. For example, 76 percent of coaches say teacher cynicism and indifference about change are obstacles. While only a minority of teachers may show cynicism and indifference, this may still create an obstacle for coaches’ daily work and the creation of deep learning and change school-wide.

The administrator’s role remains crucially important to the success of this or any initiative. Principals are key actors in creating the professional climate in their school. Year Two survey data indicate some positive signs of increasing integration of coaches into building leadership roles. In the coach survey,

87 percent of coaches said their instructional leadership was endorsed and supported by their administration. And in the administrator survey, 96 percent of administrators agreed that “Coaches are a vital part of the school leadership team.” Yet, 40 percent of coaches reported a lack of administrative support as an obstacle to their work.

Inadequate time for planning and collaboration Forty-two percent of teachers interviewed said that insufficient time for PAHSCI activities, especially one-on-one coaching and implementing PLN instructional strategies, was a challenge. This included class periods that were too short, as well as inadequate time for planning and reflection. An English teacher said, “What I think most that I need is the time to be able to sit down and reflect, ‘how can I put this into my daily lesson plans?’ I wish I had more of that time. I think we all do.” The coach survey indicated that coaches also per-

ceive challenges related to time. Seventy-four percent of coaches say lack of teacher planning time built into the school day is an obstacle and 57 percent also identify inadequate time to plan professional development, meet with teachers, visit classrooms and debrief. Forty-seven percent of teachers surveyed disagreed with the statement, “teachers have adequate time to meet with coaches and plan with them.”

Learning and Professional Community outside of School

Finding 4: PAHSCI-sponsored professional learning opportunities effectively and consistently met the learning needs of a broad range of participants.

The chart below depicts the formal opportunities for cross-district professional learning within PAHSCI during Year Two.

Year Two PAHSCI Forums for Cross-Site Professional Learning

Type of Setting	Facilitator	Primary Participants	Frequency of Sessions
PLN Centralized Course	PLN staff & Foundations	Mentors Coaches and Administrators	3 multi-day meetings in summer and early fall 2006. (All PAHSCI districts participate together.)
Regional Courses	PLN staff	Teachers and Coaches	PLN 1 – 5 meetings plus work at school PLN 2 – 3 meetings plus work at school Meetings take place between October and March. (Courses for five larger districts brought together teachers from multiple schools within the district; three other courses involved participants from at least two districts)
Administrator Retreat	Foundations Mentors	Administrators	November 2006 (All PAHSCI districts participate together.)
Networking Sessions	Foundations Mentors, PLN Project Manager, and expert consultants	Coaches and administrators	Separate east and west sessions in December; all-PAHSCI session in May.

PAHSCI provides multiple cross-district professional learning opportunities for a wide range of differently positioned participants including teachers, coaches, building administrators and district administrators. These participants come from very different school contexts and cultures and bring a range of needs, experiences and expectations to these sites of learning. Across these differences, participants rated all the major PAHSCI learning opportunities very highly:

- **PLN Centralized and Regional Courses:** At the end of each of the three sessions of the 2006-2007 centralized trainings, participants completed evaluations. An average of 95 percent of participating administrators and coaches agreed that the sessions were useful and would enhance their work with PAHSCI. PLN courses, particularly PLN 1, have consistently garnered very positive reviews from participating teachers. Overwhelmingly, the PLN Regional course evaluations demonstrate that participants are experiencing positive changes in their teaching and in students' engagement and learning. Over the two years of PAHSCI, almost 1,000 teachers have earned PLN credits. The following quotes convey what excited teachers about the PLN courses:



I've found that when students are on task during class, they are less likely to start causing problems in other ways. So it's just helpful in every aspect. I signed up for the PLN 2 class next year because I really want to get a better understanding of it, and I want to be a better teacher and I want to keep the kids learning more.... the PLN classes were good. The instructors gave a lot of real life examples. A lot of modeling of how to teach certain strategies in the classroom. So that was helpful, the modeling really worked for me. They gave us these articles to read, and every one of them was like, 'I did not even think of that, I've got to do that.' They were real eye-openers for me. It was an exciting class for me.

Teacher 1 (Since taking PLN I)

I went through the PLN 1 this past year. This is my first year teaching, so for me it was absolutely awesome.

Teacher 2

- **Networking Sessions:** At the three 2006-2007 networking sessions, an average of 94 percent of administrators and coaches agreed that the session was useful and would enhance their work with PAHSCI.
- **Administrator Retreat:** An all day session on educational change featured Tim Lucas, one of the authors of *Schools that Learn*,³⁶ as presenter. His presentation and other aspects of the day facilitated by Foundations' mentors were highly rated by district and school administrators from across the state.

Finding 5: The variety of PAHSCI sites for cross-district learning both strengthens school-based professional community and facilitates the development of larger learning communities and networks across schools and districts.

³⁶ Senge, P. M., Cambron-McCabe, N., Lucas, T., Smith, B., Dulton, J. & Kleiner, A. (Eds.). (2000). *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education*. New York: Doubleday.



Regional and centralized trainings and networking sessions foster both school-based and cross-school professional community. Regional trainings bring together school-based teams of teachers and coaches from multiple schools and/or districts for PLN training. Their structure links them to in-school learning opportunities since coaches follow up and collaborate with teachers back in their building. Centralized trainings and networking sessions involve school-based teams of coaches and administrators from PAHSCI schools across the state and provide participants with opportunities to meet by school as well as with others in their job role (administrators, coaches) or in diverse groups across role and school/district.

Across PAHSCI-sponsored professional learning opportunities, participants valued sessions that provided opportunities to collaborate with other districts, with their school-based teams, and with their same position peers. As was the case in Year One, some participants continued to indicate that at home they lack sufficient opportunities to talk and problem solve with other PAHSCI leaders in their district (e.g., coaches, administrators, district leaders). Participants continued to emphasize that they value time to talk as a district about issues and challenges specific to their context.

When asked to rate the December networking sessions, participants at both the east and west sessions commented on the benefits of sharing and networking with other districts. When asked for suggestions for the May networking sessions, the most frequent request from participants at the west sessions was for more sustained and comprehensive opportunities to network with other districts. One district administrator commented after a centralized course session, “The most useful aspect was collaboration among peers and colleagues as we worked in a professional learning community that will benefit our district’s educational goals.”

Survey data indicate that coaches already see coaches from other districts as a resource and as part of a wider support network. Seventy-nine percent of PAHSCI coaches surveyed indicated that other PAHSCI coaches across the state have been important to their development as a coach. Cross-visitation is taking place in some contexts. For example, 35 percent of coaches surveyed say they visit PAHSCI coaches in other schools weekly or monthly. However, 66 percent of coaches report that they have never visited a coach at another PAHSCI school.

Finding 6: Mentors play an important role in facilitating participant learning and leadership development, both within schools and across schools and districts.

The Annenberg Institute for School Reform noted in a summary of research that effective coaching supports collective, interconnected leadership across a school system.³⁷ We would posit that PAHSCI’s addition of mentors to the coaching model works to enhance coaches’ efforts in fostering such leadership.

Coach and administrator survey and questionnaire data affirm the utility of the mentor role. Eighty-two percent of coaches said that the monthly visit from the Foundations mentors

³⁷ King, D., Neuman, M., Pelchat, J., Potochnik, T., Rao, S., & Thompson, J. (2004). *Instructional Coaching: Professional Development Strategies that Improve Instruction*. Providence, R.I.: Annenberg Institute for School Reform.

had been important to their development as a coach. Ninety-three percent of administrators said training with PAHSCI leadership mentors was very or somewhat useful. To the chagrin of some coaches, administrative personnel changes and other confounding factors have led to tensions between some coaches and administrators. In these incidences, coaches have looked to their mentor teams to help negotiate a better understanding of roles and responsibilities.

Coach questionnaire responses about how PAHSCI has contributed to their own leadership development underlined the importance of the mentors in this process. One coach said, “The monthly coach-mentor meetings have helped me to be a better coach. I listen more and more carefully to what the teachers say. I ask pointed questions. I also feel at ease running study group sessions and in-service sessions.” Another said, “Our mentors listen to us and get back to us in a timely fashion, as always.”

Mentors also organized and facilitated additional professional learning opportunities that supplemented the formal opportunities discussed above. These opportunities took place within individual schools or involved coaches from multiple schools within a district or across districts. For example, one group of mentors worked with two districts which each had a relatively small number of coaches (six in all). They brought the coaches together for full-day professional learning sessions approximately six times during the year to help participants build their coaching skills. Participants met as a whole group and in math and literacy sub-groups. As one mentor said, “They were able to share what was working and to feel like they had expanded their resources beyond their own coaching team.” The school teams were able to help each other with issues they both faced but which one or the other may have had new strategies to address. This networking expanded the learning beyond the individual schools.



Conclusion

In *Schools That Learn*, Peter Senge argues that change is only sustainable if it involves learning and that successful change takes place through multiple layers of leadership.³⁸ Instructional change research indicates that internalization of an overall approach and accompanying changes in belief and skills are the hardest to achieve as opposed to simply trying new strategies in isolation. Strong professional communities are important to PAHSCI’s success because they provide the context for distributed leadership and the deeper learning that promotes sustainable changes in instructional practices and belief systems.

The varied sites for learning have been effective overall. The Initiative-wide learning opportunities supported participant learning and helped develop professional community across schools and districts. At the school level, it is clear that administrators matter. Our research shows that professional community is strongest when administrators encourage coaches and teachers to assume leadership and create time for teacher-teacher and teacher-coach collaboration.

³⁸ (Senge et al., 2000)

Section 5

The PAHSCI Experience: Participants Speak

Three years is a good start, but teachers and students need the kind of support that coaches provide on an ongoing basis. Comprehensive high schools are stressful places for teachers and students. The personal attention and appreciation that coaches provide for teachers is therapeutic for teachers and in turn for students. Teacher support and collaboration within a school are essential for the school's growth.

– PAHSCI District Administrator,
Centralized Training Evaluation, 2007

PAHSCI leadership, partners and participants begin Year Three with accomplishments to celebrate as well as challenges to address. At the June 2007 centralized training, PAHSCI leadership, administrators, Foundations' mentors, PLN facilitators, and coaches were asked to brainstorm what they needed “to meet or exceed their expectations and goals for Year Three and beyond.” Not surprisingly, perspectives differed on the challenges ahead and the supports needed to tackle those challenges.

However, there was strong agreement around a number of themes:

- inadequate time for coaching;
- the critical importance of strong administrative support for instructional coaching;
- the need for continued resources; and
- a statewide commitment to instructional coaching beyond Year Three.

Below, we summarize participants' reflections in order to bring their voices to bear on priorities for the initiative going forward. We have organized the summary in a way that sheds light on how perspectives were similar and different across the roles of the various participants.

District and School Administrators

Administrators talked about the need to provide more time for coaches to work one-on-one with teachers in their classrooms and in consultative conference before and after the classroom visits. A few administrators pledged to decrease the amount of paperwork given to coaches, while others spoke of their commitment to create meeting time for coaches and teachers during the school day, something many admitted they had not assisted with adequately in the previous years. Time, many administrators reflected, would also allow teachers to integrate what they are learning into their practice and thus create more meaningful lessons. In addition, several pledged that they would make the time to conduct walk-throughs to all classes, in order to see for themselves how teachers are incorporating PLN strategies into their instruction.³⁹

³⁹ *Instructional walk-throughs:* A team of observers, usually a building administrator and teachers, however, sometimes parents, visits several classrooms where they look for very specific things. In most walk-throughs, the teaching continues and the visitors sit in the back or walk quietly around the room looking for evidence of the particular goal/classroom strategies they would expect to find. Narrowing the focus to specific instructional activities, the team assembles the information from their notes and they share what they have learned with the teachers whose rooms have been observed.



Administrators requested technical assistance with organizing and analyzing data, more training for coaches in analyzing data, and more meaningful (relevant to their school's goals) data to analyze. A few administrators mentioned the need for teachers to have time to digest and process classroom assessment data. For several administrators, data analysis was directly linked to time and resources: "Financial resources to have substitutes for teachers so that time is available to train faculty to use data to drive their decision making and instruction/assessment of students."

All administrators want to see the Initiative continue either in its current form (with coaches) or, at the very least, through PAHSCI's legacy of increased teacher collaboration and incorporation of the PLN framework. Several spoke of the need to "find funds to continue our coaches in their current capacity" and several "hoped to receive assurance that the Coaching Initiative will last longer than three years."

Foundations' Mentors

Mentors reported the importance of coaches and administrators extending their reach. As one mentor shared, "I'd like to have the administration and coaches of each school fully committed to reaching all teachers in the schools on [behalf of] the PAHSCI effort and the PLN strategies." Several mentors proposed that PAHSCI strive to recruit the maximum number of staff members in PLN I, II, and III courses. A few mentors mentioned broadening PAHSCI's reach by engaging students in the process of improving student achievement:

"They need to be included in the dialogue and to accept that they are regular players in this now and into the future."

Mentors wanted to help coaches "grow study groups so teachers can begin to look at student work together and collaborate on setting goals for improving learning." An important goal, according to mentors, is expanding leadership beyond administrators and coaches to classroom teachers. One mentor wrote, "Build capacity for teacher leadership by expanding the core group that develops and delivers professional development opportunities." Finally, one mentor expressed the need for "increased opportunities for deep coaching with teachers." Mentors wanted to meet more frequently with coaches and teachers throughout the year as well as to promote and secure greater district-wide collaboration and investment as a way to sustain and expand the initiative.

PLN Instructors and Facilitators

PLN instructors and facilitators were very concerned about administrative support for teacher recruitment for PLN courses. They saw administrators as key in encouraging teachers to take the PLN courses and in empowering teachers to take the risks associated with trying new instructional strategies. Also, several instructors and facilitators emphasized the need for administrators to consistently support the coaches. As one PLN facilitator shared, "I do feel frustrated for the coaches who are at the whim of administrators who sometimes do and sometimes don't support the Initiative."

Coaches

An overwhelming majority of coaches said that more time was needed for them to work one-on-one with their teachers, and also more time for teachers to plan their units and lessons and refine their use of the PLN strategies. Acknowledging that the BDA Consultation Cycle—so important to changing classroom practice—takes time, coaches urged that administrators and teachers “carve out more time for coaches to work with teachers using the BDA Consultation Cycle.”

Many coaches mentioned the absolute necessity for administrators to be mindful of the goals of the initiative and to honor coaches’ role as a one-on-one consultant to teachers. One coach wondered what she might be able to accomplish if she were provided the time to actually work with teachers without being “pulled in different directions by the administration.” Several coaches lamented the fact that, as one wrote, “Much of the time that should have

been spent on coaching was redirected to administer 4Sight and PSSA.” Several coaches cited the need for “better communications between administrator and coaches.”

Consistently coaches expressed the need for administrators, coaches, mentor, and teachers to have the same “game plan.” As one coach explained, “A priority for Year Three is administrators, mentors, and coaches to work more closely together for common goals and we will include teacher leaders in this endeavor.”

Coaches emphasized that learning how to motivate and to reinforce motivation for teachers to grow, is not one-time learning. One reflected honestly, “I need to continue figuring out how to best motivate and encourage some teachers.” Speaking to the challenges inherent in wearing so many hats, coaches reflected honestly about their need to:

- continue to develop all of the capacities that a coach needs to foster teachers’





professional growth and learning;

- institutionalize study groups and build on them, bringing new teachers into leadership roles so that change can be sustained;
- encourage teachers in action research.

With an eye to professional community, several coaches hope to create “cross curriculum cooperation to have teachers learn and teach one another.”

Conclusion

Taken as a whole, participants’ declarations, admissions, and hopes for Year Three all point to their commitment to build upon, improve, and sustain the effort they have put forth in implementing instructional coaching. It is interesting to note that of the 145 responses to our open-ended prompt about what front line participants needed to meet their expectations and goals, not one respondent questioned the value of the work begun in PAHSCI or their potential to meet their expectations and goals. This raises an important question, What are the implications for sustaining instructional coaching beyond Year Three?



Section 6

Sustaining PAHSCI: Year Three and Beyond

I envision every teacher would work together/collaborate on the various strategies presented to them and include these strategies on a daily basis. Every teacher would reflect on how he or she is contributing to student learning. Every teacher would become a leader with regard to study groups and presenting professional development.

—Instructional coach

In the above quote an instructional coach lays out her hopes for what PAHSCI will achieve. Her thoughts speak to the conditions necessary for sustaining the Initiative's efforts. There are numerous conceptualizations of sustainability in the education reform literature. In one helpful example, it is defined as, *the capacity of a system to engage in the complexities of continuous improvement*.⁴⁰ Typically, sustainable reforms have:

- **Depth:** The reform matters because it is making a positive contribution to the academic program and student learning. There is sufficiently deep understanding of the innovation that its adoption is not procedural, but authentic. The instructional coach above addresses depth when she talks about teachers' use of the PLN strategies on a "daily basis," teachers' reflection on how their instruction contributes to student learning, and the ability of teachers' to move into leadership roles as they become knowledgeable and skilled in the PLN framework.
- **Breadth:** The reform spreads because its positive effects are recognized and embraced by increasing numbers of people and organizational units. The instructional coach above addresses breadth when she talks about "every teacher" would use the strategies, every teacher would reflect, and every teacher would become a leader.

- **Endurance:** The reform persists even as leaders come and go and the education pendulum swings. The depth and breadth of its institutionalization help it to survive transitions. The instructional coach above addresses endurance as she talks about the future and what teachers will be doing.
- **Advocates:** People inside and outside the system have deep understanding of the reform and recognize the positive difference it is making. They speak up about its merits and help to mobilize energy and resources for its continuation. The instructional coach above addresses advocacy when she talks about all teachers becoming leaders. As leaders, they would be demonstrating their ownership of the research-based instructional strategies.

In the following, we review what we have learned about PAHSCI to date with the goal toward providing insights and recommendations for sustaining the momentum of the Initiative in Year Three and beyond.

Accomplishments

Our research indicates that PAHSCI is making a difference. It is having a positive impact on all of the intermediate outcomes that we measured in both our qualitative and survey research. Participating teachers across the subject areas are working with coaches and using PLN strategies, offering more opportunities for students to read, write, and speak as a way of more deeply engaging them in the ideas and skills of the subject area. Not surprisingly, the more highly involved a teacher, the more competently s/he implements the strategies and incorporates the principles of the framework into his/her practice. The one-on-one support offered by instructional coaches to teachers as they use the PLN framework is catalyzing teacher change in the very ways intended by program designers. This study

⁴⁰ Hargreaves, A. & Fink, D. (2003). *The Seven Principles of Sustainable Leadership*. Boston: Educational Leadership.

adds to the growing body of evidence that instructional coaching helps teachers as they implement new teaching techniques.

Perhaps, most importantly, when teachers adopt the PLN strategies, their students are taking more active roles in the classroom and assuming more responsibility for their own and their peers' learning—quite an accomplishment, given statistics on adolescents' disengagement especially the dismal data on high school drop out in schools with large numbers of low-income students. Increased student engagement is also promising as an early indicator that may lead to improved student achievement.

And PAHSCI is positively influencing schools' professional culture. In many schools, PAHSCI is supporting development of professional communities by influencing how teachers learn together, creating new school-based leaders, and broadening networks of support and learning within schools. Because of PAHSCI, many school leaders are re-thinking their conceptions of professional development. They value the instructional coaching model of job-embedded professional learning and they are offering increasing numbers of participating teachers the opportunity to lead professional development about classroom instruction. The PLN framework is providing a common language and set of principles for planning and reflecting on instruction and advocates for instructional coaching using a research-based instructional framework.

However, two important questions remain. First is: Will these positive differences in intermediate outcomes add up to positive changes in student achievement? That is a question that researchers will address at the end of Year Three of the project. Second is: Can instructional coaching be sustained and, if so, in what form? It is this second question that we address below by identifying challenges to sustainability and making recommendations for addressing them.

Challenges

In order for PAHSCI's program goals to be achieved, all stakeholders must work together to overcome the challenges named in this report that can impede progress towards sustainability:

- District and school leaders must encourage teachers across all subject areas to participate in PLN courses and one-on-one coaching, the surest pathway to improved instructional practices. They must find the time necessary for coaches to work with teachers in the meaningful ways described in the BDA Consultation Cycle. Administrators have committed to doing this. Follow-up is needed to make certain that this is happening.
- Coaches must continue to hone their skills in order to address teachers' concerns about: 1) meeting the needs of all students especially those with special learning needs and 2) strategies for classroom management when using PLN learning activities. They must also make the BDA Consultation Cycle a priority, making certain to include the "after" portion which is essential to teachers reflecting on their practice.
- Mentors must support coaches in their learning and work with school leaders (including coaches) to remove the persistent obstacles that undercut coaches' work and teachers' continued learning. Mentors should re-enforce PAHSCI's belief that all high school teachers are teachers of literacy, especially with administrators. An important focus should be the BDA Consultation Cycle. Finally, mentors are uniquely positioned to align the work of administrators and coaches with the goals of PAHSCI and to address the tensions that arise among key players and that can stymie momentum for change.

In the final segment of this report, we provide more specific recommendations that the data suggest are important for PAHSCI to reach its full potential for sustainability and achieve its major goals.



Recommendations for PAHSCI Leaders

In our Year One report, we presented several recommendations. We have provided an update of progress in addressing those recommendations in Appendix D. One essential recommendation offered was *to take steps to expand and deepen the work in Year Two*, (extend the reach to a greater number of teachers and administrators, and deepen participants' understanding of the PLN framework).⁴⁶ We conclude that many of those steps were taken in Year Two. In order to maintain and broaden these successes during Year Three, we present the following recommendations focusing first on the start of school and then moving to overarching recommendations for Year Three and beyond.

⁴⁶ (Brown et al., 2006)

Starting the School Year

- Hold school-wide professional development for staff on the PLN framework and the BDA Consultation Cycle for instructional coaching.
- Provide “PLN framework refresher” opportunities to staff.
- Create a forum (possibly with mentors and administrators) for coaches to discuss the challenges they face and the vulnerabilities they feel as the Initiative enters Year Three. (Many coaches reported that they were worried about their personal futures as well as the sustainability of instructional coaching.)
- Have the leadership team review student achievement data and determine if their action plan utilizes instructional coaching to target improved student achievement.
- Continue to develop coaches' skill in working with teachers who hold low expectations for students.
- Have the leadership team at each participating school meet with coaches and the Foundations' mentor team to revisit the Year Three action plan and certify that the personnel, infrastructure, and resources are in place to meet Year Three goals.

Setting Priorities

- Make working one-on-one with teachers a priority in allocating coaches time, and encourage coaches' to use the BDA Consultation Cycle with teachers.
- Promptly fill coach vacancies with respected staff, knowledgeable about the PLN framework.
- Individualize the learning supports for coaches; like students, coaches need differentiated learning opportunities.
- Support coaches in helping teachers

develop or maintain rigorous expectations for students.

Setting Year Three Goals, Celebrating Successes

- Re-enforce the goals of PAHSCI and how they should shape coaches' own professional goals and identity.
- Practice shared goal setting among coaches, administrators, and Foundations' mentors with clearly delineated benchmarks of success. Identify the roles and responsibilities of coaches, administrators, and Foundations' mentors in meeting these goals.
- Create forums to recognize successes of coaches, administrators, mentor teams, and teachers.

Communications

- Use Blogging, Blackboard, and the PAHSCI website to reach out to participants and the wider community interested in instructional coaching.
- Encourage school-based participants to participate in PLN's system of Blackboard to share learning among and across regional site participants.
- Publicly make the case that coaching is making a difference with new, mid-career and veteran teachers, and that teachers using the PLN framework strategies are reporting success with diverse student populations.

Leadership Opportunities

- Provide and advocate for leadership opportunities; for example, Foundations' mentors and administrators can promote avenues for coaches to move into district-

wide leadership opportunities. Likewise, coaches and administrators can bring teachers into leadership roles.

Administrative Support

- Have Foundations' leadership mentors provide additional support to new administrators.
- Enlist the support of school and district administrators to advocate for instructional coaching at high schools across the state.
- Enlist district and school administrators to advocate for all high school teachers to be teachers of literacy.

Lessons About Instructional Coaching

As in our Year One report, we offer some early lessons from PAHSCI that are worthy of note by others interested in adopting instructional coaching as a reform initiative:

- Tie the work of coaches to research-based instructional strategies that are central to the school's approach to overall school improvement. These practices serve as the focus of coaches' work with teachers.
- Make one-on-one work with teachers a high priority for coaches and use a standardized framework for one-on-one work such as the BDA Consultation Cycle.
- Make certain that there is a clear, shared understanding about the role and responsibilities of instructional coaches.
- Assign more than one coach to a school and intentionally build a coaching team that works with other school leaders to establish instructional priorities and strategies for meeting those priorities.

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Appendix A

Participating Districts and Schools 2006-2007

District	High School
Bellwood Antis	Bellwood Antis
Erie City	Central
	East
	Strong Vincent
Harrisburg	Harrisburg
	SciTech
	William Penn
	Career and Technical Academy
Hazleton	Hazleton Area
Intermediate Unit 1	Burgettstown Area
	Charleroi
	Jefferson Morgan
	McGuffey
	Mapletown
	Uniontown Area
	Albert Gallatin Senior
Keystone Central	Central Mountain
Lancaster	J. P. McCaskey
	McCaskey East
Philadelphia	Germantown
	Simon Gratz
	Abraham Lincoln
	William Penn
Reading	Reading
Scranton	Scranton
	West Scranton

Appendix B

Research Methodology

In Year Two, Research for Action’s mixed-methods research continued to examine PAHSCI’s implementation and its impact on intermediate outcomes including: professional community, leadership development, reform ownership at the school level and literacy-rich, student-centered curriculum, teachers skilled in diverse strategies, and student engagement at the classroom level.

This appendix discusses the major data collection methods and data analyses in the Year Two research.

Surveys

All PAHSCI coaches and all teachers and administrators in PAHSCI high schools were included in the sample for the coach, teacher and administrator surveys. Surveys focused on the following areas: respondent characteristics, school environment and professional climate, understanding of PAHSCI and the PLN framework, coaches and their role, PAHSCI supports, professional learning opportunities, professional community, instructional change, coaching challenges (coaches only), student engagement and achievement, and PAHSCI in Year Three.

Coach and administrator surveys were administered online but paper copies were also available if needed. Teacher surveys were administered in paper form only. Paper surveys were scanned. All survey data were imported into SPSS for preliminary analysis. Further in-depth analysis of teacher and coach surveys was conducted by quantitative consultants Timothy Victor, Ph.D. and Emmanuel Angel, M.S. A technical report on the analysis of the teacher and coach surveys is available upon request.

The coach survey had a response rate of 96 percent (N=89). The teacher survey had a response rate of 65 percent (N=1230). The administrator survey had a response rate of 81 percent for building administrators (N=21).

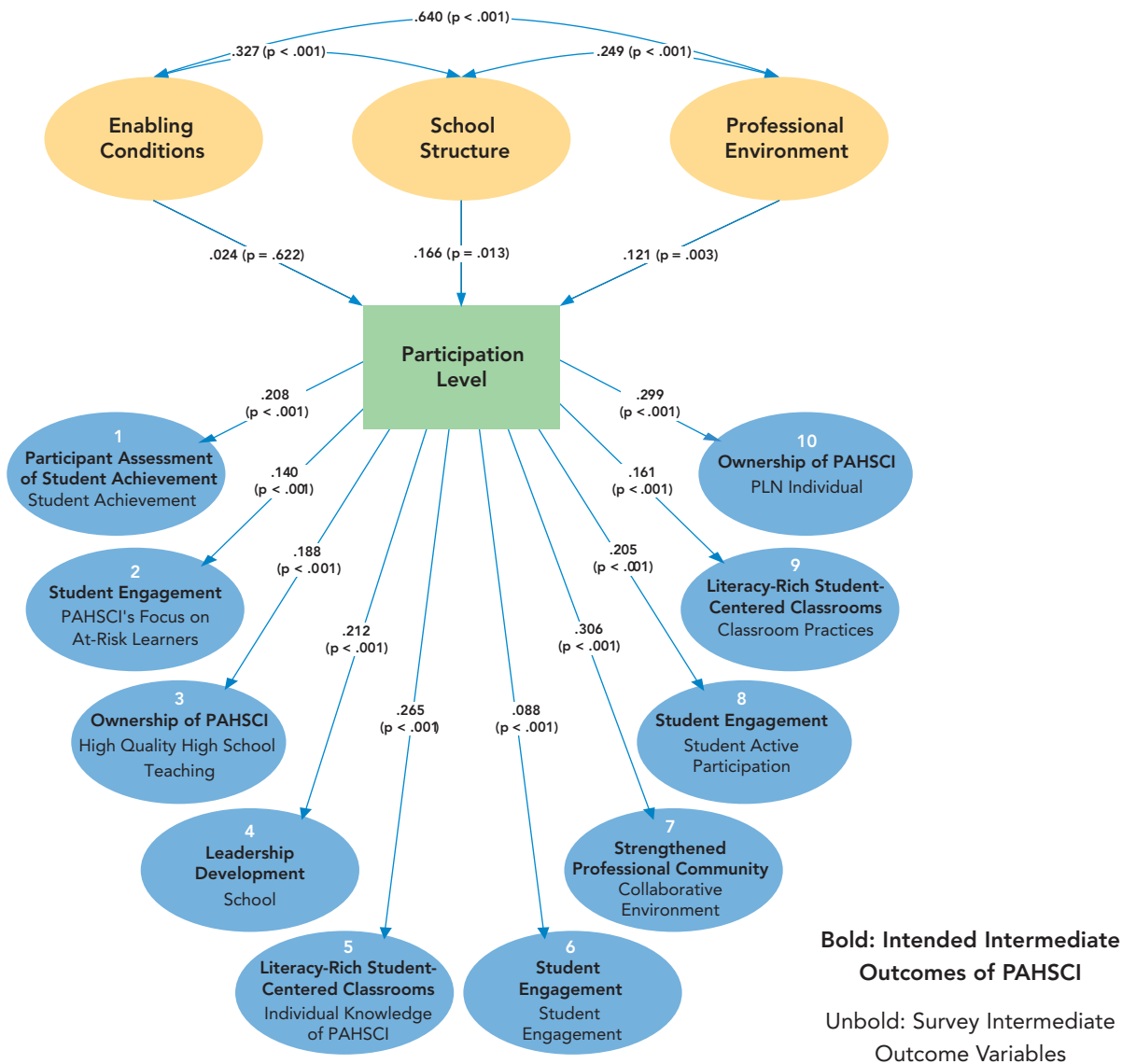
Teacher Survey

A teacher’s participation level was determined by affirmative responses to any three of the following four questions: (a) Attendance at a Year One or Year Two PLN Regional Course; (b) Attendance at school-based professional development about PAHSCI at least twice a semester; (c) Attendance at study groups at least twice a semester; and (d) one-on-one work with a coach at least twice a semester.

Thus, teachers who responded positively to any three of four of these indicators were viewed as having a high participation level in PAHSCI. Teachers who responded positively to two or fewer of the indicators were viewed as having a lower level of involvement in PAHSCI. By this definition, 18 percent of teachers were classified as having a high participation PAHSCI.

The teacher survey model shows the relationship between the determining variables (enabling conditions, school structure and professional environment), the central variable (teacher participation level, i.e., high participation in PAHSCI) and ten outcome variables. The links indicate how strongly associated different variables are, as well as their statistical significance.

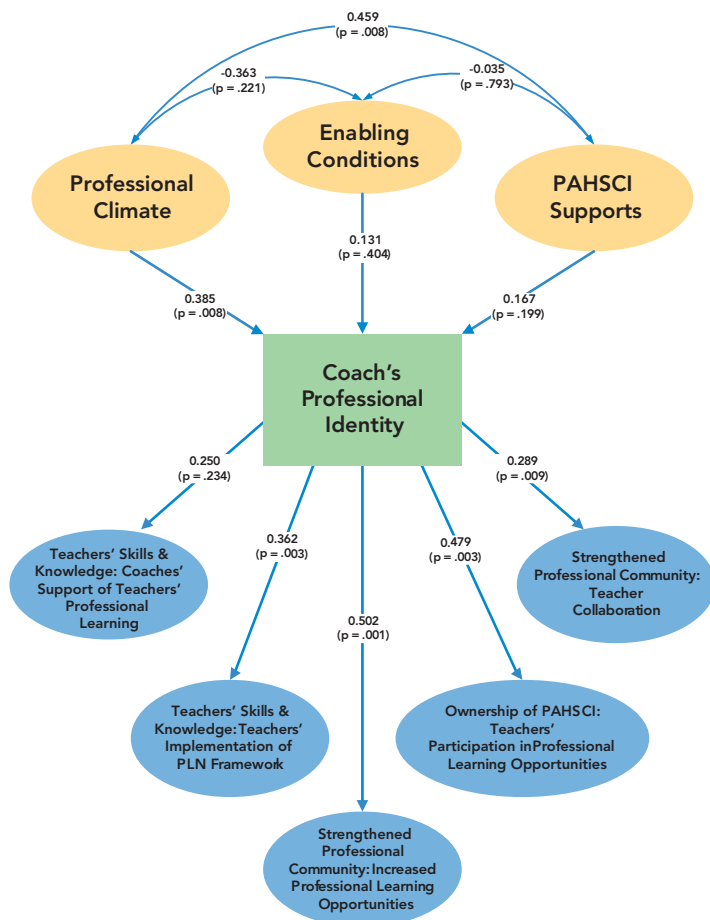
Teacher Survey Model



- 1 Measures the degree to which teachers believe their coach has played a role in improving student achievement.
- 2 Measures the degree to which teachers believe PAHSCI should focus on at-risk learners.
- 3 Measures the degree to which teachers believe that PAHSCI could be a catalyst for high quality teaching.
- 4 Measures the degree to which the teachers feel school staff buy into and implement the PLN framework.
- 5 Measures teachers' responses about their own knowledge and understanding of PAHSCI

- 6 Measures the degree to which teachers agree that their students work in small groups, are engaged, communicate content knowledge, think critically, and are involved in literacy rich activities.
- 7 Measures the degree to which teachers agree that coaches and PAHSCI have positively impacted professional community.
- 8 Measures teacher perceptions about students' response to specific PLN strategy.
- 9 Measures how many specific PLN instructional strategies were introduced to teachers through PAHSCI.
- 10 Measures responses about teachers' understanding and knowledge of the PLN framework and how it can impact student learning.

The 2007 Coach Survey Model



Coach Survey

Our central variable, coach’s professional identity, was determined by responses to questions regarding coaches’:

- 1 knowledge of their role as a coach, knowledge of the PLN framework, and knowledge of content (88% of coaches responded positively);
- 2 active participation in various school-based meetings (75% of coaches responded positively);
- 3 active leadership in ongoing PAHSCI trainings (65% of coaches responded positively); and
- 4 self-rated effectiveness in improving classroom practice and student achievement (80% responded positively).

Coaches who responded positively on 3 out of 4 of these indicators were viewed as having a professional identity that was closely linked to PAHSCI. Inversely, coaches who responded negatively on two or more of these indicators were viewed as having a professional identity that was more peripheral to PAHSCI. By this definition, 73 percent of coaches were classified as having a professional identity closely tied to PAHSCI.

The 2007 Coach Survey Model shows the relationship between determining variables, the central variable (coach’s professional identity), and outcome variables. In addition, the links show how strongly associated different variables are, as well as their statistical significance.

In our model, a coach’s professional identity was *influenced by* three variables (see top half of figure):

- 1 professional climate of the school;
- 2 enabling conditions that supported or impeded the work of coaches; and
- 3 PAHSCI and school supports.

In our analytic model, a coach’s professional identity *influenced* five intermediate outcomes (see bottom half of figure).

School Site Visits

RFA visited seven high schools in six PAHSCI districts across the state. Schools were chosen to represent diversity in terms of geographical region of Pennsylvania (eastern, western, central), urban city, and school size. We visited PAHSCI schools and classrooms to gather direct observational data. We also interviewed teachers after we visited their classrooms so they could clarify and elaborate on the observed lesson and further describe their participation in PAHSCI and their understanding of the PLN framework.

The protocol was purposefully brief (15-20 minutes). As Lightfoot notes, it is important to observe and talk to individuals in their natural setting. “Surrounded by the familiar, they can reveal their knowledge, their insights, and their wisdom through action, reflection, and interpretation.”⁴⁷

We selected 52 teachers in seven schools who varied in their level of participation in PAHSCI activities and in their use of resources. We limited our selection to ninth and tenth grade English and mathematics teachers because it provided both a similarity in level of content—the beginning years of high school—and diversity in content mathematics and English.

We used the following indicators to assess teachers’ high or low participation in PAHSCI:

- a) attendance at PLN regional course;
- b) attendance at school-based professional learning given by PAHSCI coaches, mentors, or administrators;
- c) participation in study groups, departmental meetings or additional examples of collegial learning opportunities connected to PAHSCI content;
- d) working one-on-one with a coach, i.e., BDA Consultation Cycle, and
- e) ongoing requests for PLN resources, checking-in with coaches, requesting classroom visits and acting on feedback from coaches and/or volunteering to have mentors visit and observe a coach/teacher collaboration.

To meet the criteria of high participation, teachers needed to demonstrate three of the five indicators. In addition, coaches provided their assessment of teachers’ level of participation (e.g., high or low) in PAHSCI.

In collaboration with PLN facilitators and instructional coaches, RFA staff designed a classroom visit guide and teacher interview protocol with two main parts. The first called for a continuous recording of both the teacher’s and the students’ behaviors during the observation. The second assessed the lesson for its use of PLN framework strategies; the facilitation of instruction; and student engagement. The Classroom Visitation Guide on the next page shows the lesson components that researchers were asked to track for each of the three dimensions. (In the analysis of observations, all three dimensions are equally weighted.) RFA researchers debriefed observations with a co-researcher who was also conducting observations in that school to increase inter-rater reliability. Researchers interviewed teachers after the observation to determine the typicality of the lesson and the response of students.

Coaches’ assessment of PAHSCI participation and RFA assessments of PAHSCI implementation were put into a spreadsheet. We used these assessments of implementation to assess the level of integration of the PLN framework in each classroom. (See Section 2 for a more detailed discussion of the four levels of integration). Analytic codes were created for the teacher interview data and interviews were coded using Atlas.ti. Data within these descriptive categories were then analyzed to identify themes that emerged from the coding. Observation notes were recorded and analyzed to gain a greater understanding of the strategies teachers were using and the potential connection to student engagement.

Questionnaires

Questionnaires were administered in December and May to mentors, administrators, and coaches during networking sessions in which all administrators and coaches were

⁴⁷ Lightfoot, S. L. & Davis, J. H. (1997). *The Art and Science of Portraiture*. San Francisco: Jossey-Bass.

Classroom Visitation Guide

Pedagogy <i>Instructional Focus</i>	Facilitation of Learning <i>Teacher Behaviors</i> <i>Climate for Learning</i>	Student Engagement and Response <i>Student Behaviors</i> <i>Student Activities</i>	Examples of PLN Framework <i>Check if observed</i>
Implementation of PLN Framework (See Examples) State Content Standards Reading Writing Composition Math Computations Math Problem Solving Critical Thinking Skills Test Preparation Maintenance/review of skills Tutorial time Enrichment opportunities	Modeling/demonstrating Facilitating/scaffolding Assessing Listening/watching/feedback Guiding practice Telling/direct explanation Lecture High Level Questioning Student Work Displayed Models of Graphic Organizers/other resources Displayed	Reading Writing Manipulating Talk (Student led) Oral Response Individual Group Individual Reading Small Group Listening Recitation	1 Note-making 2 Jigsaw 3 Reflective writing 4 Do Now – Type 1 and Type 2 Writing 5 On Demand Prompts – Type 3 Writing 6 Transacting with Text 7 Read Aloud Think Along 8 KWL

expected to participate. Questionnaires focused on these front line educators' assessment of program implementation and the program's early impacts on three areas: establishing literacy rich classrooms, strengthening professional communities in schools, and developing educational leaders who have the skills to help teachers improve their practice. Questionnaires were scanned into SPSS and analyzed using SPSS software. Responses to open-ended questions were coded according to themes arising in the data.

At the June 2007 centralized training, 145 participants were asked to respond to the prompt, "What do you need to meet or exceed your expectations and goals for Year Three and beyond?" Mentors, coaches, and administrators answered this prompt. Responses to the open-ended prompt regarding Year Three were analyzed within respondent groups, e.g., mentor, coach, administrator. Major themes were identified for each group.

Event Observations and Evaluations

RFA attended all project-wide PAHSCI

professional development sessions including four centralized course sessions (Year 2 sessions in June, August, and September 2006 and Year 3 in June 2007), the administrator retreat (November 2006), and the networking sessions (December 2006 and May 2007). RFA staff attended large and small group sessions and wrote up fieldnotes. Data from observations of professional development sessions were analyzed to provide feedback to partners about professional development and emerging issues.

RFA conducted event evaluations at the centralized trainings and at the networking sessions. The evaluations asked participants to rate the usefulness of various sessions and gave them the opportunity, through open-ended questions, to provide further feedback including suggestions for future sessions. The participant feedback was analyzed immediately and shared with partner organizations to inform the planning of future events. Evaluations were scanned; scaled responses were calculated through SPSS software; and themes in the open-ended responses were identified and coded.

Appendix C

PLN Strategies

Brief Descriptions from copyrighted material
Penn Literacy Network

1. Text Rendering:
During activity requiring students to go back to text, evaluate and choose key sentences, phrases, and words to express the main idea or make connections. This can be done orally in a large/small group and/or in writing.
2. Word Splash:
Choose keywords and phrases from a story; requires students to use these words in a creative writing piece before reading the text. Key issue: Limit the number of words; this is a prediction task also.
3. Key Term:
Before reading – choose one key term from the reading. This requires students to write and connect their feeling about term. This is a predictive/reflective type of writing experience.
4. Note-Making:
Double entry/Cornell note-making – requires students to connect, question, and interact with text. (Ex. Key terms on left. Main ideas and questions on right)
5. Jigsaw/Expert Jigsaw:
Cooperative Learning Task – Chinking text in expert groups and home-group/sharing teams. Students become expert in one area and share their knowledge with home group. This is a complete BDA experience.
6. Reflective Writing:
This is a before activity which asks students to connect with the text before they transact with text, enabling students to tap prior knowledge.
7. Pair/Share:
This during activity requires students to read (together) and discuss their understanding of the text. They share their understanding of the text (during the paired reading) and go back and forth in their discussion, stopping to discuss and make connections with the text.
8. Critical Reading:
Re-reading activities/going back to the text, enabling students to infer correctly; strategic reading.
9. Self-Questioning:
BDA activity, with students creating questions that may be answered from text.
10. Previewing and Predicting:
For all content areas – using student’s prior knowledge to focus, motivate, and provide interest.
11. Chunking:
Taking apart pieces of any text and grouping them into manageable learning segments. All are strategies to improve comprehension of text.
12. Mental Imaging:
Making a “mind picture” using verbal clues as a descriptive tool.
13. Do Nows:
Type 1/Type 2 writings – often used to model and guide student responses; usually stimulate interest.
14. Paragraph Frames:
A type of model and checklist used to assure that all components of a well-written paragraph are present.
15. Templates:
(Same things) These are used to model and guide student responses.
16. Revision and Peer Revision:
Used in Type 3, 4, and 5 writing assignments and includes one-foot voice, partner read-alouds, as well as individual revision.
17. Document Review:
Activity to celebrate, understand and instruct using student writing samples.
18. FCA’S:
Focus Correction Areas used to simplify quality feedback and focus student writing. (Specific areas to be corrected: For example – punctuation, varied sentence structure, spelling)

19. Rubrics:
Criteria for assessment and teaching. Can include teacher-made or student made assessment; benchmarks for scoring.
 20. Choice In Assignments
Provide choices for students; negotiated choices for writing.
 21. On Demand Prompts:
Type 3 writing assignments tied to instruction.
 22. Literature Circles:
Activity to provide motivation and choice in student reading by assigning roles to individual members of cooperative groups. This activity enhances comprehension of a novel through group dynamics.
 23. I-Search:
Personalized, streamlined research across content areas.
 24. Performance Assessment:
A method of assessing student understanding and application of material. It requires students to demonstrate that they have mastered specific skills and competencies by performing or producing something.
 25. Transacting With Text:
Constructing meaning from text and applying student-text-context interactions.
 26. Journalism/Free Writing:
Connecting students' ideas to classroom contexts.
 27. Paraphrasing
 28. Back To Text
 29. Summarizing:
(Strategies 27, 28 & 29 are) After reading activities to improve comprehension, understanding and connection to materials
- 30-34 Type 1-5 Writing:
 - Type 1: Capture Ideas
Writing that has no correct answer-or, if there is a correct answer it's okay to guess. One draft
 - Type 2: Respond Correctly
Writing that makes a point – has correct answer or content. One draft
 - Type 3: Edit for FCAs
Writing that is read aloud and reviewed by the author who then asks three critical questions: Does it complete the assignment? Is it easy to read? Does it fulfill the focus correction areas? One draft.
 - Type 4: Peer Edit for FCAs
Writing that is type Three writing and has been read aloud and critiqued by another. Two drafts.
 - Type 5: Publish
Writing that is publishable, that can go outside the classroom without explanation or qualification. Multiple drafts.
 35. Guided Lecture Procedure:
Before/During/After experiences using structured overviews, Cornell note-making, processing of key words, and questions to guide and understand lectures.
 36. Read Aloud Think Along:
Teacher and student modeling, oral reading of questions and connections about text.
 37. Point of View Re-Write
Re-written retellings from a particular character's point of view.
 38. KWL:
Structure/graphic organizer for connecting the new to the known through an active learning process.

Appendix D

Recommendations and Updates

To extend and deepen changes in classroom practice, continue the press to:

Recommendations (Year One Report)	Year Two UPDATES
Develop a comprehensive and intensive strategy for promoting writing in the content areas.	Math and English teachers interviewed report a dramatic increase in the quantity and quality of student writing. Teacher survey data: 25% reflective writing daily; 45% once or twice a week. 55% use written "Do Nows" daily.
Help teachers examine data and reflect on their implications for changes in classroom practice.	Implementation of 4Sight and other benchmark testing provided increased examination of data. Networking May 2007 an expert consultant provided training in data analysis to participants. Coaches unanimously report data analysis support is a new skill they have used in 2006-2007.
Devise new instructional strategies and adapt existing PLN strategies to address the needs of diverse groups of students learners (i.e. ELL, Special Education).	2006-2007 trainings featured break out sessions on special needs learners. Overall evaluations rated these sessions as helpful.
Implement study groups that bring teachers together to examine classroom practice by focusing on student work.	Increase in number of study groups. Most frequent topics: PLN framework, student engagement approaches, alignment of curriculum
Increase opportunities for teachers to participate in PLN courses or in PLN-related professional development opportunities.	Regional Trainings (485 people received PLN1 or PLN 2 credits in 2006-2007).
Attend to the specific needs of math coaches and math teachers within the Initiative and how best to support their growth and learning.	Math Specific Breakout at 2006-2007 trainings and networking sessions; Math specific coaches' training sessions at October 2, 2007. Networking Session.
Provide coaches with additional tools and skills to deepen the knowledge of teachers currently supported and to reach additional teachers.	PAHSCI website; PAHSCI Newsletter (9 issues); Presentations at conferences; Attendance at national conferences on coaching. Library of texts for Study Group use.
Articulate clear expectations for the roles and responsibilities of coaches and make certain that everyone understands those expectations.	Monthly Mentor team visits. PAHSCI website; PAHSCI Newsletter (9 issues); Reaffirmed expectations at networking sessions and administrative retreat in Nov. 2006.

To build the enabling conditions greater attention be given to:

Recommendations	Responses
Building the knowledge and commitment of district and school leaders. Ensure ongoing and significant professional development and professional learning opportunities for Administrators.	Administrators Retreat, 2006 Networking Session Administrator Breakouts. Action Planning Support from Foundations’ Mentors. Monthly support from Foundations’ mentors.
Clarifying the role of the principal in encouraging collaborative and productive relationships between teachers and coaches.	Administrators Retreat, 2006 Networking session Administrator Breakouts. Regular monthly meetings with Foundations’ Leadership Mentors.
Providing systematic opportunities for district and school leaders to network about learning about professional development and participation in PAHSCI.	Administrators Retreat, 2006 Networking sessions 2006-2007, Administrator Breakouts. Cross district visitations.
Providing opportunities for administrative problem solving across districts about common challenges.	Administrators Retreat, 2006 Networking session Administrator Breakouts Foundations Leadership Mentors.
Focusing work of the leadership mentors to make the most positive difference (i.e.) help school and district leaders shape instructional priorities to align with the PLN framework.	Leadership Mentors meet monthly and plan as a leadership group. Former Leadership Mentor serves as "Senior" Leadership Support. Attendance at conferences to nourish professional growth of mentors.
Continuing to reflect on and make adjustments to the mentor role.	Adjustment and redevelopment of Mentor Logs. Mentors professional development on building coach capacity.

To further coordination of partners’ work greater attention be given to:

Recommendations	Responses
Maintaining partner integration, coordination and close communication.	Monthly partner meetings; partners report on new learnings and participate in collaborative problem solving

To build the conditions for sustaining and scaling up coaching Partners give greater attention to:

Recommendations	Responses
Developing a political and communications strategy.	Hired Communications staff. Advisory Board Meetings; Joined PA Collaborative Coaching Board; Two PAHSCI "expert consultants" work as advocates for the initiative; meet with key state stakeholders; PAHSCI Newsletter (9 issues); Hired PR firm.
Defining more explicitly what would constitute sustainability and expansion.	Partner meetings and Advisory Board Meetings zeroed in on sustainability and a viable action plan. Pennsylvania Department of Education (PDE); Ongoing discussions with school/district leadership teams to identify sustainable components.
Creating processes, timelines and supports for work on sustainability at the school and district level.	PAHSCI Management and consultants along with partner organizations; Ongoing support from PDE.
Developing leaders from all ranks who will champion coaching and promoting the visibility of these leaders in local, state, and national circles.	Presentations and attendance at local and national conferences on coaching.
Articulating the relationship between coaching, teacher change, and student achievement.	RFA memo, "Much More Prepared This Year": Frontline Educators Assess PAHSCI Progress; Monthly Newsletters; Evaluating the receptivity, use, and delivery of PLN framework and mentoring program by AED; Analyzed student outcomes and PSSA growth.
Helping schools prioritize activities which assist in developing a more collaborative, instruction-focused professional culture.	RFA formative feedback, Foundations' Mentor Teams, Leadership teams used PAHSCI generated assessment tools for analysis and planning; Action planning to identify priorities.

About the Authors

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