

Coherent Instructional Improvement and PLCs

Is It Possible to Do Both?

A synthesis that draws on two common approaches to PLCs produces a more coherent way to tap the power of teacher teams to improve curriculum, instruction, and assessment.

By David Jacobson

Scheduling common planning time for teacher teams can be an effective way to use scarce teacher time, but often schools don't make good use of this resource. In response, two approaches have arisen for structuring teaching collaboration and developing effective professional learning communities (PLCs). While both approaches have clear strengths, they also have weaknesses. What's needed is a new framework that draws on both approaches.

The first approach to developing effective PLCs promotes grassroots, teacher-led inquiry into teaching practices. The other is a more structured, administrator-driven process that focuses on the analysis of assessment results. Both approaches are valuable, and many schools have had great success using one or both of these models.

The strength of each approach is the other's weakness. Schools that adopt the inquiry-oriented model often don't provide enough direction for their teams. In their zeal for long-term exploration, these schools may underestimate the value of monitoring ongoing assessment results. Conversely, the results-oriented approach sometimes leads to top-down, superficial implementation and, because of its focus on short-term results, often underinvests in building the capacity of teachers to deepen their use of effective teaching strategies in classrooms.

Furthermore, neither approach provides adequate guidance to schools on how to implement PLCs so that the overall *coherence* of teaching and learning in schools improves. How do schools ensure that the work of different teams is aligned and moving in the same direction? How does each team ensure that the work it carries out adds up to a coherent whole?

Perhaps most important, how can schools and districts integrate professional development on effective teaching strategies into the ongoing work of learning communities so teachers are supported in translating ideas into practice and PLCs don't become yet another competing professional development initiative?

TWO APPROACHES

Two articles in a recent issue of *Educational Leadership* on teacher learning — one by Linda Darling-Hammond and Nikole Richardson (2009) and one by Richard DuFour and Robert Marzano (2009) — highlight the differences between these two schools of PLC thought.

The first, older perspective emphasizes inquiry and dialogue and is based on the work of a number of education scholars (Rosenholtz 1991; Louis et al. 1995; Little 1990; McLaughlin and Talbert 2006; Darling-Hammond 1997; Elmore 2004). According to Darling-Hammond and Richardson, "In this model, teach-

DAVID JACOBSON is senior education specialist at Cambridge Education, Westwood, Mass., and writes the blog, commonpriorities.org.

ers work together and engage in critical dialogue to examine their practice and student performance and to develop and implement more effective instructional practices” (2009). Darling-Hammond and Richardson point to such collaborative practices as peer observations of practice, analysis of student work, and study groups as examples of PLC activities. Teachers engage in inquiry around issues they identify, giving this approach a more open-ended quality. For example, Dana and Yendol-Hoppey (2008) describe a process in which teachers pose questions, collect data, and then undertake significant research into new strategies as they work on changing classroom practice.

The advantage of the inquiry-oriented approach is that teachers can identify challenges, take ownership of the process, develop their own inquiry skills, and learn or deepen their knowledge of effective teaching strategies. Yet it requires relatively high levels of leadership, direction, initiative, and collabor-

ative expertise to chart a productive course of inquiry and carry it through effectively. Some teams may not make good use of common planning time and may become discouraged (Elmore 2004; Newmann et al. 2001; Rowan 1990; Supovitz 2002; Wood 2007). Also, teams may veer off in different directions, diluting the development of schoolwide expertise and coherence.



Jlunlimited/Comstock

ative expertise to chart a productive course of inquiry and carry it through effectively. Some teams may not make good use of common planning time and may become discouraged (Elmore 2004; Newmann et al. 2001; Rowan 1990; Supovitz 2002; Wood 2007). Also, teams may veer off in different directions, diluting the development of schoolwide expertise and coherence.

The second approach to PLCs focuses on school-based grade-level teams, teachers of the same courses,

and vertical content-area teams (DuFour et al. 2006; Schmoker 2006). While ideally still intended to be teacher-driven, this approach explicitly directs administrators to set a specific agenda for school-based teaching teams. Integral to this agenda are two activities: determining what’s most important for students to learn (often called essential or “power” standards) and developing and analyzing common formative assessments. Principals meet quarterly with teams to analyze various products that teams create, including “curriculum, pacing guides, analyses of results, and plans for improving on results” (DuFour and Marzano 2009). While also emphasizing creating collaborative school cultures, this results-oriented concept has a tighter, more structured, and somewhat more top-down feel.

The results-oriented approach structures collaborative work around two critical activities. Priority learning goals allow teachers of the same subject to give students a common foundation for their future

The Common Priorities cycle is a framework that explicitly promotes alignment across teams, the coherence of each team’s annual work, and the integration of professional development and professional learning community.

studies. Common formative assessments create opportunities to improve assessment design skills, analyze results across classrooms, and collaborate on how to adjust instruction accordingly. The disadvantage of this directed focus, especially if it becomes too focused on narrow, short-term achievement results, is that it can lead to very top-down implementation, diminish teacher enthusiasm, and impede learning and capacity building. The more circumscribed and simplified the focus of teams, the

more circumscribed their learning will be. Andy Hargreaves refers to tightly controlled and narrowly focused teacher teams as “performance-training sects” and worries that while such teams may get quick results, they may not lead to sustainable improvement. Teachers aren’t likely to take PLCs seriously if they perceive such groups to be narrowly focused and driven by heavy-handed administrators (Hargreaves 2003; Wood 2007; Smith 2009).

Furthermore, the results-oriented concept can easily become *too* assessment-driven. In what is one of the

key texts of the results approach, *Learning By Doing*, by Richard DuFour and his colleagues (2006), identifying essential standards and analyzing the results of common formative assessments are advocated as the primary activities of teaching teams — with little substantive discussion regarding how teams collaborate on instruction. Clearly, DuFour and his collaborators expect that analyzing common assessments leads to collaboration on how to teach differently. Yet in this model, instructional innovation comes about *primarily* as teachers *react* to their analyses of assessment results. There are drawbacks to such a one-sided emphasis.

Analyzing assessment data typically yields many excellent teaching ideas. However, analysis alone won’t help teachers translate these ideas into classroom practices. Furthermore, brainstorming in response to assessment results relies exclusively on teachers’ *current* teaching repertoire. Clearly, PLCs are intended to share knowledge and bring teachers’ resident expertise to bear on learning challenges. But the goal is to *build* this collective expertise as well.

As Michael Fullan and Ben Levin sum up this issue:

A two-way street between assessment and instruction should be the centerpiece of any capacity-building strategy. Most school systems make the mistake of loading up on testing as the driver of reform. . . . Good instruction should drive assessment as much as the reverse. Find and promote the best instructional practices linked to results. Keep instruction and assessment aligned and in balance (2009).

Furthermore, neither the inquiry-oriented nor

the results-oriented approach adequately addresses the overall coherence of a school’s efforts to improve teaching and learning. Coherence has emerged as a key theme in the school improvement literature in response to the “fragmentation and overload” that accompanies the dizzying array of programs and initiatives that many schools attempt to implement (Fullan 2001; Hatch 2002). Fred Newmann and his colleagues found that schools in which instructional improvement efforts became significantly more coherent over time — in the eyes of their teachers — raised student achievement approximately *three times as much* as did schools in which coherence declined (Newmann et al. 2001).

Three dimensions of coherence are critical to the successful implementation of PLCs:

1. Coordinating the work of different teams so they don’t work at cross-purposes and instead build on each other’s work, leading to coherent learning experiences for students;
2. Supporting each team’s use of common planning time so that meetings build on previous meetings rather than unfold in a haphazard, scattershot manner; and
3. Integrating professional development on teaching strategies into a PLC’s ongoing work.

All too often, professional development runs parallel to the work of teacher teams, with the result that teachers aren’t supported in actually implementing what they’re exposed to and are pulled in different directions by different initiatives.

THE COMMON PRIORITIES SYNTHESIS

The Common Priorities approach to coherent instructional improvement developed organically

ARTICLE AT A GLANCE

The two most common approaches for developing professional learning communities, the inquiry-oriented and the results-oriented approaches, both fail to adequately address the overall coherence of a school’s efforts to improve teaching and learning.

Three types of coherence are critical to realizing the full potential of professional learning communities: alignment across teams, the coherence of each team’s annual work, and the integration of professional development and the professional learning community.

A new model for developing professional learning communities, the Common Priorities approach, combines the strengths of the other two approaches and explicitly promotes the three critical types of coherence.

FIG. 1.
Basic Teach — Assess — Adjust
Feedback Loop

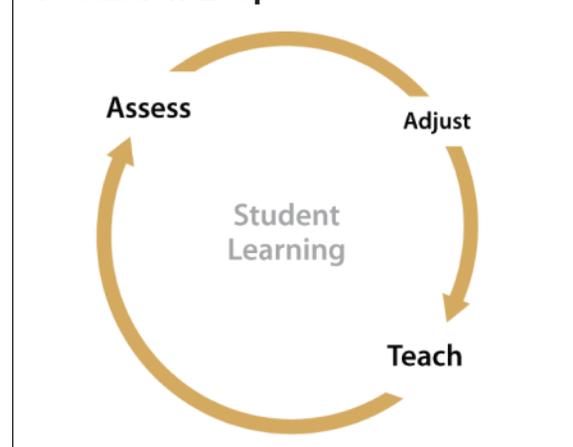
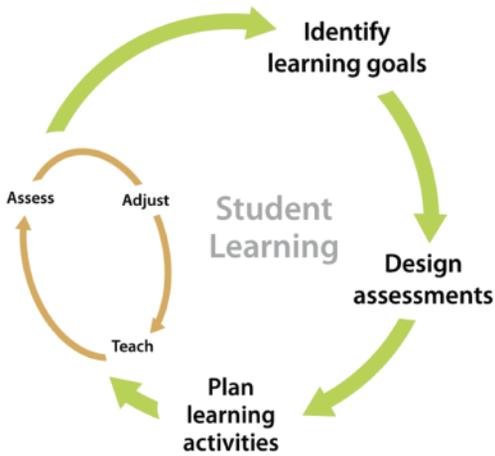
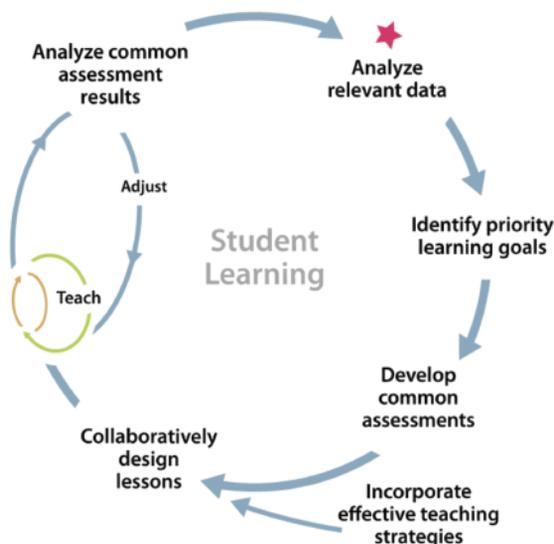


FIG. 2.
Plan Backward, Teach Forward



over many years as my colleagues and I worked with a wide range of schools and districts on lesson design, curriculum mapping, formative assessment, data analysis, lesson study, and related projects. This model provides support for inquiry-oriented projects within a structure of vertically aligned essential standards and common assessments. It honors resident expertise and creates ample opportunities to build that expertise by incorporating effective practices and strategies into everyday classroom prac-

FIG. 3.
Common Priorities Instructional Improvement



tice. This approach has been successfully implemented in a range of school settings.

The best way to understand the Common Priorities approach is to begin by considering a simple feedback loop that's central to effective teaching. Every day, teachers walk into classrooms, engage students in a set of learning activities (that is, they teach), assess the extent to which students are learning, and adjust accordingly. These everyday formative assessments may be quizzes, tests, and essays, but they also include student responses to open-ended questions, informal observations, and perhaps the collective level of fidgeting in the classroom. (See Figure 1.)

This process typically occurs in the context of a plan. Teachers plan a lesson or unit that includes student learning goals, assessments of student learning, and learning activities. Following Wiggins and McTighe's notion of backward planning, designing good lessons requires that learning activities prepare students for assessments, and assessments assess priority learning goals (2005). An illustration of this model of good lesson design is found in Figure 2.

The Common Priorities framework is based on an analogous cycle. But in this case the steps are collaborative activities in which teachers engage to improve curriculum, assessment, and instruction across multiple classrooms. As with the backward design of lessons, what's important about this cycle of collaborative work is less the sequence of activities than the coherence of the result — that is, that collaboratively developed lessons prepare students for common assessments of the most important learning goals.

The Common Priorities cycle depicted in Figure 3 emphasizes that collaborative activities are aligned. Teacher teams:

- **Analyze** state assessments, national and state standards, and the expectations of the next level of education in preparation for the next step in the cycle, identifying priority learning goals.
- **Identify priority learning goals** (that is, essential standards) within each content area or course and align them across grades to ensure that learning progresses logically and smoothly and expectations increase as students progress through the grades; they also **set priority team goals** aligned with school goals.
- **Develop common assessments** of priority standards that they will administer around the same time so that they can analyze student learning patterns across classrooms.
- **Collaborate on designing lessons** that

COMMON PRIORITIES AND INTERDISCIPLINARY TEAMS

Middle and high schools that create professional learning communities must decide how to coordinate the work of two groups of teachers: content-area teams (that is, departments) and grade-level teams. The examples in the article are all of teams working within specific content areas. The North Central Essential School, which serves grades 7-12 in the economically depressed city of Fitchburg, Mass., is a good example of a school in which the collaborative tasks summarized in the Common Priorities cycle are carried out by both traditionally organized departments and interdisciplinary grade-level teams.

North Central has an impressive professional development calendar that allocates common planning time to grade-level teams, content-area teams, and other meetings. Content-area teams choose priority standards, develop assessments, examine student work and other data, and attend to typical departmental matters. Grade-level teams devote their time to advisory planning and counseling, discussion of individual students using a structured “Kid Talk” process, interdisciplinary projects, and each grade’s portfolio learning process.

Through the portfolio process, each grade-level team develops about a dozen “portfolio learning goals.” These goals tend to be somewhat broader than state standards yet capture what the teachers believe are each grade’s essential learning tasks. The portfolio learning goals specify the products that each student must create for an end-of-year portfolio assessment that includes oral and written components. A mid-year portfolio review provides an opportunity to share formative feedback with each student in the presence of a parent or guardian, thus serving as a common formative assessment.

Most grades have learning goals related to vocabulary, reading comprehension, composition, data analysis, graphic representation, research, mathematical reasoning, structured problem solving, communication, leadership, learning, and a special focus (such as Spanish or health). Not only do these goals focus on skills that students must master, they also promote interdisciplinary connections. Students write compositions, conduct research, analyze data, and demonstrate structured problem solving in various classes, and they can draw from their work in these different classes to meet portfolio requirements. Thus, all teachers in a grade share ownership of these portfolio learning goals.

With grade-level learning goals and assessments in place, teachers at North Central are extending their use of interdisciplinary units and projects. Thus, both within and across disciplines, teacher teams are streamlining curricula, developing and analyzing common assessments, and crafting teaching strategies to support students in mastering priority learning goals.

prepare students for the common assessments, sometimes incorporating strategies or approaches in ways that extend their practice.

- **Teach** both their collaborative lessons and their individual lessons, formatively assessing student progress along the way.
- **Analyze student work** from the common assessments and **brainstorm the instructional adjustments** that are necessary, including interventions for struggling students and extensions for achieving students. Through this analysis, they identify topics and skills that need additional focus, brainstorm teaching ideas that may be more effective next time, and begin to list challenging topics and skills that may merit more extended collaborative lesson-design efforts in the future.
- **Compare the results** of their state assessments and other achievement data, assess their school and team goals, and revise priority standards and common assessments as needed. The cycle of collaborative work then repeats.

COHERENT TEACHER COLLABORATION

The Common Priorities cycle is a framework for guiding the work of collaborative teams that explicitly promotes the three types of coherence that are critical to realizing the full potential of PLCs: alignment across teams, the coherence of each team’s annual work, and the integration of professional development and professional learning community.

Alignment Across Teams. Identifying priority learning goals can play an important role in aligning the work of teams. P.S. 37, a high-poverty, all-minority elementary school in Queens, N.Y., began the Common Priorities approach by having grade-level teams analyze two years of assessment results to identify areas that required the most emphasis. Teams then shared their analyses with their colleagues in adjacent grades so that they could understand and adjust their respective priorities, asking questions like, “how can 2nd grade best prepare students for the focus of 3rd grade?” Each team then chose one-third of the New York state performance indicators as priorities, understanding that they would still teach all the indicators while allocating the most time to the priorities. A small group reviewed these lists of priorities to check for alignment, and then new lists of indicators with priorities highlighted by bold type were distributed to teachers in preparation for the common assessment and collaborative lesson-design work that would follow.

This process can also be done at the district level. The public schools in Reading, Mass., a suburb

north of Boston, brought together a K-12 vertical team of teachers for a three-day summer workshop to align its entire science program around priority learning goals. This vertical team examined and discussed two sets of national science standards, David Conley's (2005) lists of the standards necessary for success in college science, results from a teacher survey, and a historical analysis of state assessments. Each grade then posted priorities on chart paper, and the whole group examined the lists for alignment. These priority standards were shared across the district and used to anchor the work of cross-district teams working on assessment design.

As teams analyze data and identify priority standards, they can also identify specific schoolwide challenges — such as improving reading comprehension or improving student experimentation skills — that can serve as concrete, realistic goals in an annual improvement plan, goals that can further align the work of PLC teams.

Coherence Across Team Meetings. In extending the notion of backward design to the collaborative activities that teacher teams carry out, the Common Priorities cycle reinforces the importance of a coherent approach to the design of curriculum, instruction, and assessment. Teacher teams devote the majority of common planning time to the activities of the cycle, planning backwards to ensure that collaboratively designed lessons prepare students for common assessments of priority learning goals. Teachers collaboratively analyze the results of common assessments in order to adjust instruction and monitor intervention and extension activities, reinforcing the everyday formative assessment teachers do as they design their individual lessons.

Once vertically aligned priority standards are in place, teams begin a process of sketching out a unit and drafting a common assessment, collaborating on lessons, and then analyzing the results by looking at student work and conducting item analyses. This process begins by focusing first on designing a common assessment within a rough unit outline and then analyzing the results a few weeks later. Teams can then build on the momentum and collaborative spirit this establishes by increasing the time devoted to the somewhat more challenging activities of peer reviewing lesson plans and assessments, learning effective strategies, and peer observing lessons.

Integration of Professional Development and Professional Learning Community. Drawing on both the results-oriented and inquiry-oriented approaches to PLCs, the Common Priorities approach creates a balance between common assessments used by all teachers of a particular subject and collaborative lesson-design projects on which teachers work with a colleague or two. Common assessments provide a

kind of discipline that comes from looking at results across classes. Teachers like creating common assessments because they see the benefit of identifying patterns across classrooms, and they find the process easier than creating all their assessments themselves.

Yet, it is critical that teachers also have significant time to collaborate on lessons and teaching strategies. At first, common assessments and collaborative lesson design in the Common Priorities framework

The results-oriented approach explicitly directs administrators to set a specific agenda for school-based teaching teams; it has a tighter, more structured, and somewhat more top-down feel.

happen in an efficient, integrated manner. Teachers choose priority standards to focus on, design common assessments, and then collaborate on lessons with any remaining time they have. This process leads to a good foundation of units, assessments, and first-pass lesson ideas and builds a familiar teacher collaboration routine. The issue is what happens after this foundation is in place and the low-hanging fruit — new and different lesson ideas — has been picked. Do teachers have structured opportunities to learn or deepen their mastery of effective teaching strategies and best practices?

DEEPENING PRACTICE

This last question points to the critical role that extended collaborative lesson design projects, of the sort promoted by the inquiry-oriented school of thought, serve in helping schools make the most of teacher common planning time. A project at the North Central Charter Essential School, which serves grades 7-12 in Fitchburg, Mass., gives a good sense of this process. Teachers worked in small groups to use technology to raise student literacy skills. Teachers identified priority standards, developed common assessments, and then learned about different software applications that they could use to make lessons more effective. Small groups designed lessons in which the technology would improve student learning and then took these lessons to the larger group to solicit feedback, using a structured peer review protocol.

The members of each small team also observed each other as each one taught one of their new lessons, and they then brought back student work to

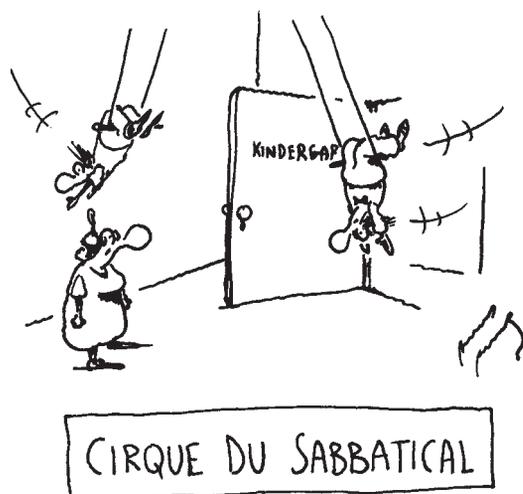
analyze with members of other small teams. Finally, each team wrote up their lessons and a reflection on what worked, areas for improvement, and what they planned to do differently next time. These lessons were shared with the rest of the school community as exemplars of the teachers' best thinking, of sensible technology integration, and as resources to inspire future lesson innovation.

Teachers at P.S. 33, an elementary school in the

As is the case with any reform, as an idea moves from promising to mainstream to ubiquitous, the risks of superficial implementation rise.

Bronx, engaged in a similar process, but this time as part of a whole-school professional development initiative. Teacher analysis of student work from common assessments suggested that students needed additional support in persuasive writing. The following year, each grade-level team in the school used common planning time to study exemplary writing and to research best practices in teaching persuasive writing. Drawing on this research, small groups designed and reviewed lessons and then examined student work at the end of the unit.

Professional development is often wasted when teachers don't have the opportunity to implement change in classrooms. Along with effective coaching, extended collaborative lesson-design projects provide precisely this type of implementation support. Furthermore, as suggested by P.S. 33's experience, through these projects schools and districts can incorporate professional development into the work of PLCs, rather than creating competing initiatives.



The combination of common assessments and extended collaborative lesson-design projects also creates opportunities to broaden learning goals and develop more multifaceted assessments. Collaborative lesson-design projects tend to encourage teachers to address more ambitious goals, such as critical thinking skills and transfer skills, while common assessments ensure that these efforts yield measurable results and address a focused set of priority learning goals, including basic skills and important content.

COHERENCE, STRUCTURE, AND INQUIRY

The Common Priorities approach is a synthesis of the inquiry-oriented and results-oriented PLC approaches. It incorporates Wiggins and McTighe's (2005) backward planning emphasis on coherence into the work of collaborative teams. The approach supports school leaders in balancing twin instructional improvement objectives: developing innovative, effective teacher teams and developing a coherent, schoolwide approach to improving teaching and learning. Collaborative lesson-design projects encourage teachers to set more ambitious learning goals and to develop engaging lessons with the appropriate level of student challenge so that students can reach these goals. These broader learning goals, such as inquiry and argumentation skills, may in turn be incorporated into a school's priority learning goals and common assessments. In short, inquiry into instructional practices creates opportunities for teachers to become more ambitious regarding the kinds of results they are seeking.

The promise, and challenge, of professional learning communities is sustainable improvement. As is the case with any reform, as an idea moves from promising to mainstream to ubiquitous, the risks of superficial implementation rise. The challenge for schools is to create an effective balance between bottom-up and top-down teacher teaming, between open-ended and structured processes, between instruction-driven and assessment-driven improvements, and between discipline and creativity. ■

REFERENCES

- Conley, David. *College Knowledge: What It Really Takes for Students to Succeed and What We Can Do to Get Them Ready*. San Francisco, Calif.: Jossey-Bass, 2005.
- Dana, Nancy F., and Diane Yendol-Hoppey. *The Reflective Educator's Guide to Professional Development: Coaching Inquiry-Oriented Learning Communities*. Thousand Oaks, Calif.: Corwin Press, 2008.
- Darling-Hammond, Linda. *The Right to Learn: A Blueprint for Creating Schools That Work*. San Francisco, Calif.: Jossey-Bass, 1997.

- Darling-Hammond, Linda, and Nikole Richardson. "Teacher Learning: What Matters?" *Educational Leadership* 66, no. 5 (February 2009): 46-53.
- DuFour, Richard, and Robert J. Marzano. "High-Leverage Strategies for Principal Leadership." *Educational Leadership* 66, no. 5 (February 2009): 62-68.
- DuFour, Richard, Rebecca DuFour, Robert Eaker, and Thomas Many. *Learning By Doing: A Handbook for Professional Learning Communities at Work*. Bloomington, Ind.: Solution Tree, 2006.
- Elmore, Richard. "Building a New Structure for School Leadership." In *School Reform from the Inside Out: Policy, Practice, and Performance*, ed. Richard Elmore. Cambridge, Mass.: Harvard Education Press, 2004.
- Fullan, Michael. *The New Meaning of Educational Change*, 3rd ed. New York: Teachers College Press, 2001.
- Fullan, Michael, and Ben Levin. "The Fundamentals of Whole System Reform: A Case Study from Canada." *Education Week*, June 17, 2009: 30-31.
- Hargreaves, Andy. *Teaching in the Knowledge Society: Education in the Age of Insecurity*. Berkshire, U.K.: Open University Press, 2003.
- Hatch, Thomas. "When Improvement Programs Collide." *Phi Delta Kappan* 83, no. 8 (April 2002): 626-634.
- Little, Judith W. "The Persistence of Privacy: Autonomy and Initiative in Teachers' Professional Relations." *Teachers College Record* 105, no. 6 (1990): 913-945.
- Louis, Karen S., Sharon D. Kruse, et al. *Professionalism and Community: Perspectives on Reforming Urban Schools*. Thousand Oaks, Calif.: Corwin Press, 1995.
- McLaughlin, Milbrey W., and Joan E. Talbert. *Building School-Based Teacher Learning Communities: Professional Strategies to Improve Student Achievement*. New York: Teachers College Press, 2006.
- Newmann, Fred M., BetsyAnn Smith, Elaine Allensworth, and Anthony Bryk. *School Instructional Program Coherence: Benefits and Challenges*. Chicago, Ill.: Consortium on Chicago School Research, 2001.
- Rosenholtz, Susan. *Teachers' Workplace: The Social Organization of Schools*. New York: Teachers College Press, 1991.
- Rowan, Brian. "Commitment and Control: Alternative Strategies for the Organizational Design of Schools." *Review of Educational Research* 16 (January 1990): 353-389.
- Schmoker, Mike. *Results Now: How We Can Achieve Unprecedented Improvements in Teaching and Learning*. Alexandria, Va.: ASCD, 2006.
- Smith, Ian. *Professional Learning Communities: Supporting Teachers with the Steady Work of Improving Learning*. Paisley, U.K.: Learning Unlimited, 2009.
- Supovitz, Jonathan. "Developing Communities of Instructional Practice." *Teachers College Record* 104, no. 8 (2002): 1591-1622.
- Wiggins, Grant, and Jay McTighe. *Understanding By Design*, 2nd ed. Alexandria, Va.: ASCD, 2005.
- Wood, Diane. "Teachers' Learning Communities: Catalyst for Change or a New Infrastructure for the Status Quo?" *Teachers College Record* 109, no. 3 (2007): 699-739.

Tired of spending more time stuck behind a desk than the kids in detention?

Learn How to Work Less, Produce More, and Still Get the Job Done in a Sensible School Week with Malachi Pancoast, President, The Breakthrough Coach. It's one of the most practical – and liberating – programs you will ever attend.

TBC is first class. I was working 17-hour days prior to the training – now only eight – and my school's math scores doubled in one year!

– Shimon Waronker, Past Principal,
Jordan L. Mott Middle School, New York, New York

the
breakthrough
coach

Management Development for Instructional Leaders
(904) 280-3052

For more information, please visit www.the-breakthrough-coach.com.

File Name and Bibliographic Information

k1003jac.pdf

David Jacobson, Coherent Instructional Improvement and PLCs: Is it Possible to Do Both?, Phi Delta Kappan, Vol. 91, No. 6, March 2010, pp. 38-45.

Copyright Notice

Phi Delta Kappa International, Inc., holds copyright to this article, which may be reproduced or otherwise used only in accordance with U.S. law governing fair use. **Copies of this article, in print and electronic formats, may not be made, distributed, or posted online without express permission from Phi Delta Kappa International, Inc. All rights reserved.**

Note that photographs, artwork, advertising, and other elements to which Phi Delta Kappa does not hold copyright may have been removed from these pages.

All images included with this document are used with permission and may not be separated from this editorial content or used for any other purpose without the express written permission of the copyright holder.

Please fax permission requests to the attention of KAPPAN Permissions Editor at 812/339-0018 or e-mail permission requests to kappan@pdkintl.org.

For further information, contact:

Phi Delta Kappa International, Inc.
408 N. Union St.
Bloomington, Indiana 47405-3800
812/339-1156 Phone
800/766-1156 Tollfree
812/339-0018 Fax

<http://www.pdkintl.org>

Find more articles using PDK's Publication Archives Search at
<http://www.pdkintl.org/utilities/archives.htm>.