

SLICING THE LAYERS OF LEARNING

BY MEREDITH CURRY AND JOELLEN KILLION

Anyone who seeks to understand what types of professional learning are most effective will read about a range of experiences — workshops and study groups, two-day conferences and learning communities, action research projects and motivational speakers. In fact, teacher professional learning is a continuum of experiences. We use the terms micro and macro learning to name the ends of the continuum.

This continuum of professional learning can be used to understand the link between cognitive learning and experiential learning as well as between traditional forms of professional learning and what the literature is now calling reform-oriented professional learning. The micro-macro continuum also helps us talk more precisely about the specific kind of learning that occurs within genuine



Professional learning communities fill the gaps as educators put new knowledge into practice

professional learning communities.

Our development of this new way to conceptualize teacher professional learning came from our conversations about Meredith's use of NSDC's Standards for Staff Development and the Standards Assessment Inventory with schools in Alaska and her research in professional learning communities, and from Joellen's work

with schools "doing" professional learning communities. When schools talk about professional learning communities, teacher learning is often missing from the discussion.

How can those who support professional learning communities emphasize educators' learning so that communities promote transformation in how people think as well as in how they act?

TRADITIONAL VS. REFORM-ORIENTED PROFESSIONAL DEVELOPMENT

In the last decade, both practice and research in professional development have suggested that not all

MEREDITH CURRY is a research associate at the University of Alaska Anchorage Institute of Social and Economic Research and a former elementary teacher. Her current work focuses on education research and program evaluation. You can contact her at anmic@uaa.alaska.edu.

JOELLEN KILLION is deputy executive director of NSDC. Her recent books include *The Learning Educator: A New Era in Professional Learning* (with Stephanie Hirsh, NSDC, 2007) and *Assessing Impact: Evaluating Staff Development*, 2nd Edition (Corwin Press with NSDC, 2008). You can contact her at joellen.killion@nsdc.org.

forms of professional learning are equally effective in producing changes in teacher practice and student learning. Just a decade earlier, professional development most often occurred after school, on specific days called professional development or inservice days when students were out of school, or during summer months.

Typically professional development just a decade ago included the following:

- University and college courses for advanced degrees in which the course selection was primarily determined by the program requirements;
- District or regional workshops selected from a catalog that included a wide array of offerings;
- District-sponsored pull-out professional development in which teachers had released days to participate in a day-long workshop at the district office or occasionally at a school;
- Conferences (local, state, and national);
- Required professional development determined by the district that coincided with curriculum or program implementation; and
- Summer workshops.

Common features of these professional development programs usually included:

- Content determined by someone other than the teacher;
- Occurred outside of school;
- Engaged teachers as individuals;
- Short-term, ranging from a few hours to a day or two;
- No requirement for implementation of the learning;
- Limited follow-up support;
- Disconnected from ongoing classroom practice;
- Teacher choice-driven; and
- Evaluated by number of participants and their reaction to the session.

In this learning environment,

teachers found the topics of focus tended to be remote from their daily practice and generally designed to apply to all teachers regardless of their content area or experience. Teachers frequently expressed frustration with this form of professional development that they say wasted their time, insulted their intelligence, and was irrelevant to their daily work. In the last few years, particularly in the literature about professional development in math and science, researchers use the term *traditional professional development* to describe this kind of learning experience for teachers.

Current research on effective professional development suggests that a different, *reform-oriented* approach to professional development rather than the traditional approach is associated with improved teaching and student learning. Yoon, Duncan, Lee, Scarloss, and Shapley (2007) reviewed the evidence on how teacher professional development impacts student learning. After an extensive review, researchers identified nine studies confirming that sustained (49 hours or more), high-quality professional development is associated with gains in student achievement. In their landmark national empirical study on the impact of the Eisenhower Math and Science Program professional development, Garet, Porter, Desimone, Birman, and Yoon (2001) concluded that *reform-oriented teacher professional development* is more effective in changing teacher practices than traditional approaches to professional development such as one-shot or short-term workshops or college courses. *Reform-oriented professional development* has specific structural features, including teacher study groups; sustained over time; collective participation by teachers from the same school; focused on the content teachers teach; active, inquiry-oriented learning approaches; and a high level of coherence with other reform initia-

tives, content, and performance standards in teachers' local contexts.

Reform-oriented professional development has these common features:

- Deepens content knowledge and pedagogy;
- Occurs at school;
- Occurs over a sustained period of time;
- Occurs in collaborative teams in which members share learning goals;
- Links teacher learning to teacher practice and student learning;
- Provides support to transfer learning to practice; and
- Success measured by results for students.

MACRO AND MICRO PROFESSIONAL LEARNING

District and school leaders, we contend, continue to struggle with the apparent dichotomy between *traditional* and *reform-oriented professional development*, especially with increased presence of professional learning communities in schools and their use in replacing other forms of professional development. Traditional professional development, most practitioners agree, is an expedient way to build the fundamental knowledge and skills associated with innovations in curriculum and instruction. Reform-oriented professional development, however, increases implementation and transformation of practice, researchers are finding. Implementation in classrooms is what impacts student learning. We propose that practitioners can negotiate the dichotomy between traditional and reform-oriented professional learning through the use of the macro-learning and micro-learning continuum.

Macro learning experiences are those that occur at the broad level. They involve explicit occurrences of cognitive learning; staff engages in these experiences to acquire knowledge and skills. Macro learning deep-

ens content and pedagogical knowledge and skill but does not guarantee that learning is transferred to practice. In professional development, macro learning is often designed for the collective learning of the whole staff, members of grade-level or vertical teams, or individuals, preferably driven by clear goals that emerged from examining student achievement data. Macro learning includes opportunities to engage in book studies, learn from external professional development providers, or attend conferences or workshops inside or outside the school. Teachers learn and work together to build common knowledge and understanding that establishes a foundation upon which individual teachers or teams of teachers will add their own experiences to seat the learning within their own classrooms.

Teachers engage in micro learning as they apply their new knowledge and skills gained through macro learning, thus transferring learning to practice. Experiential learning produces refinements in knowledge and skills that support contextualizing cognitive learning. While application can occur in rehearsal situations, genuine micro learning occurs in teachers' daily work as they engage in teaching behaviors, reflect on their practice, and collaborate with colleagues about their experience. Little (2003) calls these collaborative activities "getting things done" and "figuring things out." These include day-to-day, practice-based, collaborative, team-based activities, such as:

- Reflecting on, reviewing, or adjusting classroom procedures and routines ("getting things done");
- Analyzing student data to determine strengths and areas of need and to monitor student progress;
- Planning interdisciplinary units and lessons;
- Discussing problems of practice;
- Sharing instructional strategies

- (“figuring things out”); and
- Monitoring application of learning in their own classrooms to improve student learning.

Micro learning cements macro learning, makes it purposeful, and transforms behaviors and beliefs. It is possible, for example, for a teacher to “know about” nonlinguistic representation, to provide examples of it, and even to develop a lesson in which she incorporates nonlinguistic representations. However, this form of macro learning does not mean that a teacher changes her practice. The teacher understands the concept more deeply when she uses nonlinguistic representations within her classroom, observes

how different types of learners respond to different forms of nonlinguistic representation, knows how to adjust on the spot to improve their effectiveness, and discovers when nonlinguistic representation works and when it doesn’t.

Micro learning is often more private, yet it is the content of the interaction that occurs within communities with professional learning as their purpose and student results as their goal. Within the community, a teacher’s private micro learning can inform and refine the practice of others. When teachers collaboratively reflect about their practice using data to support and understand their prac-

tice, they deepen their individual and collective understanding and ultimately improve both teaching and student learning.

MACRO AND MICRO LEARNING IN PRACTICE

Palmer Junior Middle School in Palmer, Alaska, has spent the past four years building professional learning communities. Professional learning communities at Palmer is the context within which teacher macro and micro learning take place. Ann Marie Svedin, a teacher leader at Palmer, credits second-year principal Gene Stone for promoting shared leadership, professional learning, and

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

(Required by 39 USC 3685)

- 1. Publication title:** JSD
- 2. Publication number:** ISSN 0276-928X
- 3. Filing date:** Dec. 1, 2008
- 4. Issue frequency:** Quarterly
- 5. Number of issues published annually:** Four (4)
- 6. Annual subscription price:** \$69.00
- 7. Complete mailing address of known office of publication:**
504 S. Locust St., Oxford, OH 45056. Contact person: Leslie Miller.
Telephone: (513) 523-6029
- 8. Complete mailing address of headquarters or general business office:** 504 S. Locust St., Oxford, OH 45056
- 9. Full name or complete mailing address of publisher, editor, and managing editor:**
Publisher: National Staff Development Council, 504 S. Locust St., Oxford, OH 45056
Editor: Joellen Killion, 10931 W. 71st Place, Arvada, CO 80004-1337
Managing editor: Tracy Crow, 2441 N. 4th St., Columbus, OH 43202
- 10. Owner:** National Staff Development Council, 504 S. Locust St., Oxford, OH 45056
- 11. Known bondholders, mortgagees, and other security holders owning 1 percent of more of total amount of bonds, mortgages, or other securities:** None.
- 12. Tax status:** Has not changed during preceding 12 months.
- 13. Publication title:** JSD
- 14. Issue date for circulation data below:** Fall 2008 (Vol. 29, No. 4)

15. Extent and nature of circulation

	Average number of copies each issue during preceding 12 months	Actual number of copies of single issue published nearest to filing date
a. Total number of copies	12,400	15,000
b. Paid and/or requested circulation		
1. Sales through dealers and carriers, street vendors, and counter sales (not mailed)	None	None
2. Paid or requested mail subscriptions (include advertisers proof copies and exchange copies)	10,500	11,400
c. Total paid and/or requested circulation	10,500	11,400
d. Free distribution by mail	900	1,000
e. Free distribution outside the mail	None	None
f. Total free distribution	850	812
g. Total distribution	11,400	12,400
h. Copies not distributed		
1. Office use, leftovers, spoiled	1,000	2,600
2. Returns from news agents	None	None
i. Total	12,400	15,000
Percent paid and or requested circulation	92%	83%

16. Publication of statement of ownership will be printed in the Winter 2009 issue of this publication.

17. Signature and title of editor, publisher, business manager, or owner.

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on this form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties).



accountability. With Stone's guidance and research linking student learning to effective teaching, Palmer staff chose to use Marzano, Pickering, and Pollock's (2001) compilation of research on effective teaching strategies to learn how to teach more effectively.

Keeping student learning as their focus, grade-level teams choose one strategy to study in depth. Grade-level teams engage in macro or cognitive learning as they study the research and theory behind each strategy and the pedagogical skills for implementing the strategies effectively. Teams then engage in micro or experiential learning as they individually apply the strategies in their classrooms and then

collaboratively reflect on and share examples of the strategies in use. They come together to share and analyze student work that resulted from their use of research-based strategies, and they share ideas for implementing the strategies within other content areas or with different types of learners. Through these opportunities, teachers reflect on their collective and individual learning and practice, and shift their learning from knowledge and skills over time to affect

their attitudes, beliefs, and aspirations.

Svedin and Stone have increased time for teachers to learn by changing staff meetings from information sessions to intentional professional learning opportunities. In February staff meetings, grade-level teams took turns sharing their common cognitive learning with the whole staff to create macro-level learning opportunities for all staff members. At one meeting, the 7th-grade team shared research supporting the note-taking and summa-

rizing strategy they chose. They provided a comparison between teaching a concept using different strategies and then demonstrated the note-taking and summarizing strategy to teach the same concept, showing examples of student work that resulted from these lessons.

Within Palmer's professional learning communities, teachers engage in intentional reform-oriented professional learning at both the macro and micro levels. They sustain learning over time and focus it on the content teachers teach and the pedagogy needed to teach it. Teachers learn collectively at school and during their workday. They use inquiry to analyze and reflect on the application of macro learning in their classrooms. Their professional learning has a high level of coherence with other reform initiatives. Professional learning aligns with teacher learning, teacher practice, and student learning.

CONCLUSION

Many teachers engage only in macro-level professional learning. What is missing for many teachers is the micro, experiential learning that promotes transfer of macro learning into practice. As a result, transformation rarely occurs and the investment in professional development is lost. Macro learning alone cannot transform practice. When schools form professional learning communities, they have the opportunity to form micro learning experiences, using the community as an environment to reflect and refine practice, filling the significant gap in the capacity of professional learning to transformation teaching and student learning.

Sometimes schools grapple with time for both kinds of learning, especially for the collaboration necessary for micro learning. Sometimes the simple assumption — when teachers know, they can do — interferes with intentional application and reflection.

Sometimes professional colleagues lack the will or even skill to engage in reflective dialogue about practice using data from student work as evidence of effectiveness. Without both macro and micro learning, powerful opportunities for transfer of teacher learning into practice to produce student results are lost.

The artful weaving of macro and micro learning produces the greatest benefits for students. As school staffs continue to refine the implementation of professional learning communities, it is essential that they step back to determine if their practice incorporates sufficient macro and micro learning to produce the changes they intend — for both adults and students.

REFERENCES

- Garet, M., Porter, A., Desimone, L., Birman, B., & Yoon, K. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- Little, J.W. (2003, August). Inside teacher community: Representations of classroom practice. *Teachers College Record*, 105(6), 913-945.
- Marzano, R.J., Pickering, D.J. & Pollock, J.E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: ASCD.
- Yoon, K.S., Duncan, T., Lee, S.W.-Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. ■

Many teachers engage only in macro-level professional learning. What is missing for many teachers is the micro, experiential learning that promotes transfer of macro learning into practice.