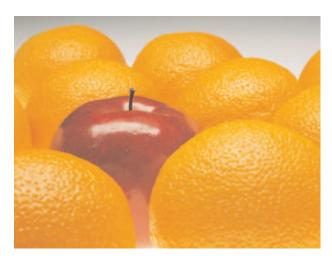


## Separating **coaching** from **supervising**



BY CATHY A. TOLL

work with literacy coaches all over the United States. These coaches are employed by their schools or districts to support teacher growth in literacy instruction. As a coach of literacy coaches, I can predict many of the questions that I will be asked because certain topics in coaching are common across sites. Among these questions are a number related to coaching and supervision.

Typical questions include:

- How can I convince teachers that I'm not working with them as a supervisor?
- How often should I report to the principal and how much should I tell her?
- What should I do if my principal wants me to tell him which teachers are not doing a good job?
- What should I do when I see something "bad" happening in a classroom? If I tell the principal, the teachers won't trust me.

At the core of such questions are two issues:

Coaching duties sometimes look similar to duties performed by supervisors;

Coaches need to maintain teachers' trust while having good communication with the supervisor (Lyons & Pinnell, 2001; Toll, 2005).

Let's explore these issues. First, though, I'd like to provide my definitions of "coach" and "supervisor." The definitions pertain specifically to work with teachers.

Coach: One who helps teachers to recognize what they know and can do, assists teachers as they strengthen their

## WHAT'S INSIDE

## Focus on NSDC's standards

Coaches march in the lead positions.

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Voice of a teacher leader

PAGE 7

#### **NSDC** tool

This can nail down an agreement between a coach and a principal.

PAGE 8



NSDC profile
Kathy Spruiell,
above, and
Christy LeMaster
multiply math
education.

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Research brief PAGE 13



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SUPERVISING COACHING

ability to make more effective use of what they know and do, and supports teachers as they learn more and do more.

**Supervisor:** One who ensures that teachers meet the requirements of their positions at a satisfactory level and continue to do so over time.

I've given these definitions a good deal of thought. I have chosen to describe a coach in positive terms rather than ones that would indicate a coach's duties in finding problems or helping underperforming teachers to do better jobs. This choice reflects my belief that coaching builds on strengths and that, while coaches may work with problem situations, they don't necessarily do so.

The definition above does not preclude working with problem situations — they certainly can arise as a coach "assists teachers in strengthening their ability to make more effective use of what they know and do," as well as when a coach "supports teachers as they learn more and do more."

I've phrased the definition of a supervisor in a similarly positive manner. In addition, I've indicated that supervisors want to ensure that teachers do their work satisfactorily not only in the present but also in the future. The inclusion of "over time" in the definition indicates that growth, not stasis, is a goal of supervision. I included another word, "satisfactory," with a great deal of thought. There are many teachers whose work is better than satisfactory, and there are many supervisors who want above satisfactory work. I'd suggest, though, that when supervisors assist teachers in moving beyond satisfactory performance, they are really coaching, according to the definitions above. In addition, when supervisors assist teachers in continuing satisfactory performance over time, they may do some coaching as defined above, or they may continue to use supervisory strategies.

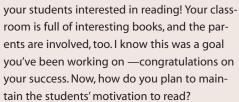
The examples in Figure 1 on this page illustrate the potential overlap between coaching and supervising in a principal's duties. The difference is subtle but important: When one is coaching, one is responding to another's needs, values, and perceptions. Yes, a coach will provide her own perspective as well, but the teacher directs the content of the conversation. In supervising, the

## Figure 1 DRAWING A DISTINCTION BETWEEN SUPERVISING AND COACHING

#### Example 1

PRINCIPAL SUPERVISING ONLY

**Principal to third-year teacher:** You have been really successful in getting

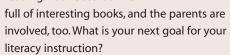


• In this case, the principal follows an observation that the teacher met his goal with a question to direct the teacher to a further goal.

#### **Example 2**

## PRINCIPAL SUPERVISING AND COACHING

Principal to third-year teacher: You have been really successful in getting your students interested in reading! Your classroom is



• In this case, the principal follows an observation that the teacher met his goal with a question to get the teacher to think about what else he may want to address about his work.

supervisor may listen to and respect another's needs, values, and perceptions, but the supervisor directs the content of the conversation.

The reverse can also occur. A coach may slip into a supervisory role. Examples in Figure 2 on p. 3 exemplify the potential for such an overlap. In the first case, the coach responds to the teacher in a nonjudgmental manner and asks an inquiring question to help the teacher solve the problem. In the second case, the coach tells the teacher what to do.

#### About the author

- Cathy Toll, a former teacher, reading specialist, and principal, is chair of elementary teacher education at Indiana University School of Education at IUPUI.
- She has worked extensively with literacy coaches and their leaders throughout the United States and also served as director of literacy research and development at the North Central Regional Educational Laboratory.
- She is founder of The Professional Learning Group, a thought collaborative dedicated to revisioning teacher professional growth.
- You can continue this conversation by e-mailing ctoll@iupui.edu.





#### Figure 2

DEMONSTRATING THE POTENTIAL FOR OVERLAP BETWEEN SUPERVISING AND COACHING

#### Example 3

#### **COACH COACHING ONLY**

Coach to 9th-grade English teacher: At this point in the school year, it may be helpful to look back at your students' cumulative writing



folders to look at the samples you've collected. **Teacher:** Oh! I forgot to collect samples all

Coach: Hmmm ...

**Teacher:** I have had the students write like crazy but because I'm new to this school, I forgot to put them in the cumulative folder.

Coach: What could you do now?

#### **Example 4**

#### COACH COACHING AND SUPERVISING

# Coach to 9th-grade English teacher: At this point in the school year, it may be helpful to look back at your students' cumulative writing folders to look at the samples you've collected.



ected.

**Teacher:** Oh! I forgot to collect samples all

year!

**Coach:** You're supposed to collect three of them. You need to see your department chair about this one.

Supervisors who act as coaches are rarely blundering, unless they are failing to perform their supervisory roles as well. However, coaches who slip into supervisory roles are usually making a mistake, often a serious mistake. Successful coaching depends upon trust between teachers and coaches (Costa & Garmston, 2002; Sweeney, 2003); if the teacher believes the coach is a supervisor, that trust may be jeopardized. In addi-

tion, when a coach becomes directive, the teacher may feel that his needs or concerns are not the focus of attention (Flaherty, 1998). Finally, coaching is new to the culture of many schools, and staff members often feel suspicious about claims that the coach is there to help. In such situations, when a coach behaves like a supervisor, even subtly, those suspicions flare and the entire coaching endeavor is compromised.

For coaching to be successful, it must be separated from supervision. Coaches and supervisors can practice a number of strategies to make this possible.

#### **Tips for coaches**

- Separate yourself from the performance assessment of teachers. Do not participate in any aspect of others' performance assessment process.
- 2. If you see a supervisory matter, trust that the supervisor will see it, too. That's the supervisor's job leave it up to her to take care of it. (Exceptions occur in cases where children are being endangered or where the coach needs to protect himself.)
- **3.** Communicate with supervisors in a neutral manner.
- Provide a written summary of coaching meetings individual and group to those involved and to the principal routinely. Develop a one-page form that includes the names of participants, date of meeting, topics discussed, goals set, and action steps. Plans for the next meeting could also be included. This information needs to be reported in a factual manner, emphasizing only positive steps taken and avoiding any statements of judgment.
- Summarize coaching activities as a whole (or by grade level or department, if there are great differences in the work you do among such groups). This summary might include the number of individual coaching sessions, group coaching sessions, demonstration lessons, and other duties performed by a coach. Don't mention teachers' names. Give a copy to all staff members.
- Consider having a coach's advisory team with a broad range of representation that will help you evaluate the coaching *process* (*not* you or your colleagues) and report on the process to

See Page 8 for a tool for developing a partnership agreement between a coach and a principal.

Coaches who slip into supervisory roles are usually making a mistake, often a serious mistake.





supervisors and staff.

- **4.** In difficult situations with teachers, you can avoid acting like a supervisor while taking steps to move ahead.
- Ask a peer (teacher or coach) to sit in on a meeting and provide feedback as a critical friend. If you can, ask the teacher with whom you are working to agree to this and even to set it up.
- Discuss with the teacher your concern and asking how to move beyond it. Focus on observable behaviors and your responses (not your guess about why the teacher is resisting, nor what you think the teacher is thinking/feeling).
- Work with that teacher one-on-one rather than in a group, which will lessen the negative influence on others.
- Invite the teacher to take a leadership role in sharing successful practices or leading a study group (a risk this could backfire).
- Discuss the matter with the teacher's supervisor if you and the supervisor can be sure that the other will not in any way reveal to others that the conversation took place. (Do this rarely and only as a last resort.)
- 5. If a supervisor tells you that a teacher needs your help in improving performance to the satisfactory level, politely tell the supervisor that you'll wait for the teacher to approach you about the matter and then you'll be glad to help. (You may need to respectfully remind the supervisor about the need for a coach to avoid supervisory duties, and point out that, if you approach the teacher, you will be acting as the representative of the supervisor.)
- 6. If a supervisor repeatedly asks you to perform activities that are supervisory in nature, ask for assistance in clarifying your role from the director of literacy or the director of coaching in your school district.

#### **Tips for supervisors**

- 1. If you believe that a teacher you are supervising needs to work with the literacy coach in order to improve performance to a satisfactory level:
- Place responsibility in the hands of the teacher, not the coach, to initiate the coaching conversation. Avoid telling the coach that the

teacher needs help and expecting the coach to approach the teacher. Ensure that the teacher knows the remediation effort is her responsibility and that the coach will be available to help.

- Ask the teacher to outline who will do what in the improvement process.
- Ask the teacher to provide notes of his work with the coach (don't ask the coach to do this).
- 2. Meet regularly with the coach, and be aware of coaching activities in general. Learn about the nature of the coach's work, including areas of success and struggle, without asking about specific supervisory problems.
- 3. If the coach broaches the topic of a particular teacher, ask whether the teacher should be the one sharing the information with the supervisor.
- **4.** Don't require the coach to "report" on individual teachers.
- Don't share confidential supervisory information with the coach.

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#### **FOR THE COACH:**

If a supervisor repeatedly asks you to perform activities that are supervisory in nature, ask for assistance in clarifying your role from the director of literacy or the director of coaching in your school district.

## FOR THE SUPERVISOR:

If the coach broaches the topic of a particular teacher, ask whether the teacher should be the one sharing the information with the supervisor.

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## Coaches lead in everything they do

oaches are teachers at heart and leaders of change. They serve as both formal and informal leaders in their schools. As leaders, they stand side-by-side with their school administrators shaping improvement strategies and supporting classroom practices designed to improve student learning. In their role as leaders, coaches engage in results-driven, goal-focused work.

As formal leaders, coaches chair committees, facilitate teams, contribute to decision making, and act as teacher leaders. They may, for example, chair school improvement teams or co-chair teams with the principal or other colleagues. They may facilitate standing committees within the school, such as the professional development committee, lead curriculum teams, such as the school's literacy team, or head task forces, such as those undertaking special projects within the school. As designated leaders, coaches use their leadership skills to help others stay results focused. As a formal leader within the school, a coach may find that she walks a fine line between administrator and teacher.

As informal leaders, coaches lead by example with their attitudes and behaviors. What they say and do convey their beliefs about any aspect of the education system. Other teachers look to coaches for indicators about how to respond to innovation or decisions. For example, if a district adopts new mathematics curriculum, teachers' response may mirror the coach's. When a coach focuses his interactions and support on services that align with school goals and not on other areas, he sends an unspoken message about the importance of the goals and his commitment to achieve them. His actions communicate to colleagues that the goals are worthy of his energy and effort. As informal leaders, coaches often have a very powerful influence on their colleagues.

As leaders within their schools, whether formal or informal, coaches contribute to the culture of the school. Through their actions, they reveal their mental models, the beliefs that influence their actions. For example, how a coach approaches an improvement effort reveals what a coach believes about the school's potential to improve. If a coach approaches improvement from a deficit approach — for example, "We have a problem here and what we are currently

doing is not working"—
she may create resistance
from teachers who have
been working very hard and
who feel as if all their work
has been discredited or not
appreciated. These teachers
may not enroll in the
change effort and may even
act to subvert the effort.

However, if a coach chooses an asset-based or success-based approach to change, he may convey his belief in the knowledge and skill of his colleagues. By beginning with the strengths of the school or staff and moving toward the staff's vision or

dream, the coach builds on what already exists, engages teachers in recognition and appreciation of their successes, and supports them in identifying where they want to go next. Authors Doug Krug and Ed Oakley in their book, *Enlightened Leadership:Getting to the Heart of Change* (Fireside, 1991), offered a simple yet powerful approach to change that uses the principle of strength-based change. Their approach includes four steps in the form of questions:

What are our successes?



Joellen Killion is director of special projects for National Staff Development Council.



#### **LEADERSHIP**

Staff development that improves the learning of all students requires skillful school and district leaders who guide continuous instructional improvement.





- What contributes to those successes? What are we doing to achieve them?
- Where do we want to go from here?
- How will we get there? What will we do?
  By working from strengths instead of
  deficits, assets instead of problems, coaches
  empower teachers rather than demoralize them.
  They infuse a can-do attitude in their colleagues.
  They acknowledge and appreciate rather than
  criticize. They assume positive intention rather
  than lack of professionalism. Building on assets
  rather than deficits has a powerful impact on
  teachers' morale, dedication, and effort. When
  they feel respected, appreciated, and professional,
  teachers are more likely to work toward the
  school's goals than when they feel disrespected,
  underappreciated, or unprofessional.

Coaches contribute to creating a trusting and blame-free environment within the school. How they use data with teachers, for example, is one way coaches model their beliefs. If the data analysis protocol begins with identifying deficits rather than successes, teachers may feel unsafe and blamed for their students' poor performance. They may even feel that they are being singled out. On the other hand, if the use of data begins with student successes, teachers are more likely to move naturally from what worked to what didn't and take responsibility for the results.

Creating a forum for dialogue, healthy conflict, and consensus is another way coaches shape the school's culture as either a formal or informal leader. Coaches can create a safe haven in which teachers can express their perceptions, identify their assumptions, and state their point of view. When teachers feel that their opinions or ideas do not matter, they become disenfranchised. When given a voice in decision making, either by offering input to shape the decision or making the decision collaboratively, teachers are more com-

mitted to the success of the decision and work actively to support implementation.

Coaches can also protect teachers from unnecessary or unimportant issues. Schools are centers for change. Schools frequently have multiple initiatives or innovations occurring simultaneously. Daily external pressures or special interests act to derail improvement efforts in schools. Coaches, working in partnership with principals, actively work to keep away distracters. Distracters may come in the form of a new initiative that is not aligned to the school's goal or a special interest. Coaches frequently make difficult decisions to ignore opportunities that may be seductively attractive in favor of that which will make a difference in the goal area.

A coach's most important leadership role is supporting instructional improvement. In their interactions with teachers, coaches continuously focus on instruction that improves student learning. Coaches help teachers use data to plan instruction, reflect on instruction, and revise lesson design so that all classroom practice meets the needs of all students. Coaches provide a variety of services that focus on instructional improvement including doing demonstration lessons, co-teaching, observing and offering feedback, conducting walk-throughs, facilitating examination of student work, or offering more formal professional development.

Coaches, whether in formal or informal leadership roles within their school, act as leaders in everything they do. They continuously guide, shape, mold, and influence others through their actions and attitudes.

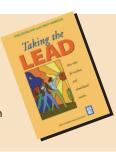
What they do and believe contributes to what others do and believe. Coaches work hand-in-hand with their principals to create a results-driven school culture that fosters teacher excellence so that all students learn.

A coach's most important leadership role is supporting instructional improvement.

For more information about NSDC's Standards for Staff Development, see www.nsdc.org/ standards/ index.cfm

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NSDC, 2006.



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## Conversation on data can turn sour

The avalanche of

data that schools

use is key to

professional

decisions. But

ranking and rating

are fraught with

human emotions.

ne of the defining characteristics of a professional learning team is a commitment to using data about student achievement to drive instruction. Together, teachers examine results and refine practices based on what they learn about students.

Few would argue about the need to refocus our profession on results. As educators, we should not only accept accountability — we

should embrace it. We should constantly seek out information about our students because to make decisions without data is inherently irresponsible and unprofessional.

But on an emotional level, data can intimidate us. Collecting and analyzing data seems too scientific — almost out of reach because we haven't been trained as formal researchers. "Data analysis" is something done by experts behind computers working with spreadsheets and speaking a language that we don't understand!

What makes data even more intimidating is that schools are almost drowning in it! Standardized test scores, formative assessments developed by teachers, attendance patterns, behavior referrals, informal classroom observations, and anecdotal records collected on each child surround us every day. Knowing where to begin is almost impossible.

For our learning team, the greatest barrier to using data was the initial fear of being judged. Working together to plan lessons and to analyze results required us to reveal our practices and ourselves to outsiders for the first time. "What if my scores are the lowest?" we wondered. "Are we willing to take that risk?"

Matters were made worse when a well-inten-

tioned instructional support teacher tried to facilitate a conversation with our learning team before our first data day. "How will you feel if you're the best teacher?" she asked. "What if you end up being the worst?"

Almost immediately, conversation dried up at our table, replaced by a sense of uneasy competition. "What if you end up being the worst," I kept thinking. Those few words stalled us. No longer was working with data something that we

were totally comfortable with. Our confidence — and our willingness to trust one another — dwindled and hesitance kicked in.

After a few days of nervous tension, we met again on our own. We decided to focus our conversations on instructional practices rather than people. For us, low scores weren't evidence of "weak teachers." Instead, they were evidence of instructional practices that need to be strengthened. Likewise, high scores weren't evidence of the "best teachers." They were evidence of instructional practices that were working and needed to be

replicated. We eliminated judgmental terms like "best" and "worst" from our conversations about instruction — and we were relieved!

While it may seem like a small semantic distinction, focusing on practices rather than people made collaboration safe. This move allowed us to reveal information that we would have otherwise guarded closely. That was essential if we were ever going to risk opening doors to our instruction.

Are conversations about data and instruction "safe" for teachers in your building? What barriers stand in the way of a genuine commitment to focusing on results?



Bill Ferriter is a 6thgrade social studies and language arts teacher at Salem Middle School, Apex, N.C.

Join the conversation with Bill by logging into the NSDC membersonly area and selecting the Blog link on the front page.

The support teacher asked "How will you feel if you're the best teacher? What if you end up being the worst?" And the conversation dried up.





#### Developing a partnership agreement between a coach and a principal

#### **ROLES, RESPONSIBILITIES, AND BOUNDARIES**

Agree on the roles coaches will fill within the school, other responsibilities the coach will have, such as teacher duties, etc., and what coaches will not do.

#### Coach

- What expectations do you have of me and the work I do?
- What responsibilities will I have as a member of this staff?
- · What are the boundaries of my work?
- What is outside the boundaries of my work?
- How do you feel about me ... serving on a district committee, facilitating a school committee, etc.

#### **Principal**

- · What do you expect of me?
- · What do we think teachers expect of you?
- · What does the district expect of you?
- What are the defined responsibilities of your role as a coach?
- How much flexibility do we have to adjust your work to meet the needs of our students and staff?

#### **CLIENTS**

Identify who the coach will work with: teams of teachers, individual teachers, novice teachers, departments/grade levels/teams, etc.

#### Coach

- · Which teachers will I work with?
- How will I determine which teachers to work with?

#### **Principal**

- Where are the greatest needs in our school?
- Which teachers have expressed interest in receiving your support?

#### SUPPORT AND RESOURCES

Specify the support and resources the coach can expect.

#### Coach

- Here is how you can support me in my role as a coach ...
- What resources are available for me?
   Technology? Space? Money for professional publications or development?

#### **Principal**

- · What support do you want from me?
- What resources do you need to feel comfortable?
- Here's how you will share in the school's resources for professional development ...

#### **EXPECTED RESULTS**

Identify the expected results of the coach's work. Define process goals which describe how the coach will work and results goals which describe the outcome of the work. For example:

**Process:** The coach will work one-on-one with 75% of the staff and every grade level.

**Results:** Student achievement on the state math assessment will increase by 20% over the next two years.

#### Coach

- What percentage of the staff do you expect me to work with?
- What results do you expect over the next year, two years, and three years?
- What are the school improvement goals?

#### Principal

- What procedural goals are appropriate for your work in this school?
- · Here are our improvement goals...

By answering these questions, a principal and a school-based coach can develop a set of agreements that can guide their work in a school. Being clear about the parameters and expectations for the coach's work also helps a principal explain to staff this important new role in a school.



#### NSDC TOOL

See the Winter 2007

issue of JSD to learn more about how school-based coaches.

## principals can support

Source: Adapted from

Taking the lead: New

roles for teachers and

school-based coaches,

by Joellen Killion and

Cindy Harrison. NSDC,

2006.

### toward their goals so that they can make mid-course adjustments.

- When do you want this finished?
- What are the short- and long-term timelines for my work?

Setting timelines for achieving goals gives the coach and the principal the ability to measure progress

- When will you be able to meet with all departments?
- When will you complete one-on-one visits with every teacher?

#### **COMMUNICATION**

Decide when to communicate, how often to communicate, and the purpose of your communication.

#### Coach

**TIMELINES** 

Coach

#### When shall we meet to discuss my work plan? How often shall we meet to discuss my work?

#### **Principal**

 When can we meet to discuss how you plan your work to serve teachers?

#### **PROCESSES**

Identify the processes the coach will use for various tasks, such as providing services to teachers, deciding priorities, how often to work with individual teachers or teams of teachers, how teachers access coaching services, how to document their work, how to report their accomplishments, etc.

#### Coach

- What process do we want to establish to help teachers access my assistance?
- What is the best way for me to spend the majority of my time?
- How will I log my work? What evidence do you want?

#### **Principal**

- What process do you think will help teachers access your services easily and conveniently?
- · How will you demonstrate how you spend your

## time?

#### CONFIDENTIALITY

Be explicit about what is confidential and how to alert each other about confidentiality concerns.

#### Coach

- · What information do you expect me to provide about my work with individual teachers or teams of teachers?
- What agreements will allow teachers to feel comfortable interacting with me, sharing their strengths and weaknesses, and being willing to take risks to change their instructional practices?
- What's the best way for me to tell you when I feel you are asking for information that is outside our agreement area?

#### **Principal**

- · What agreements will allow teachers to feel comfortable interacting with me, sharing their strengths and weaknesses, and being willing to take risks to change their instructional practices?
- How will we monitor our agreements about confidentiality?

Setting timelines for achieving goals gives the coach and the principal the ability to measure progress toward their goals so that they can make mid-course



adjustments.





## Math coaching, squared

TEACHERS TEACHING TEACHERS

PAIR MAKES A DIFFERENCE WITH MODEL CLASSROOMS IN GEORGIA SCHOOL



Kathy Spruiell, left, and Christy LeMaster

#### BY JOAN RICHARDSON

hristy LeMaster and Kathy Spruiell are a dynamic duo. At Simonton Elementary School in suburban Atlanta, the pair manages 13 Math Model Classrooms (MMCs) in their building. These classrooms at least one for each grade level — are demonstration sites for the 134 teachers at Simonton. The MMC teachers have volunteered to open their classrooms to observations by other teachers. Some of the MMC teachers are novice teachers, some veterans.

The MMCs are open for observation at the same time every week. Sometimes, LeMaster or Spruiell co-teaches with the teacher; sometimes, the regular teacher goes it alone. Teachers can volunteer to visit an MMC whenever they're interested, but the principal, Dot Schoeller, requires every classroom teacher to visit an MMC at least once each year. She hires 12 substitutes for a day and releases classroom teachers in two-hour blocks. Because of the size of the staff, it takes weeks to ensure that every teacher

has released time for the observations. Simonton has four such observation periods during the school year.

The observations follow the same pattern each time. The coaches, working in consultation with grade-level teachers, identify a math strategy for the focus of the observation. The strategy may be new or it may be one that challenges many of the teachers. Classroom teachers will visit one of the MMCs, typically in their grade level, for the observation.

Following the observation, the classroom teacher has a conversation with one of the coaches about how he or she could use the same strategy. The teacher will commit to practicing the strategy and schedule a time when the coach will observe the teacher using the strategy with his or her own students. Sometimes, the classroom teacher will ask the coach to do another demo lesson before trying it independently. Then the coach observes the teacher using the strategy with his or her own students. Finally, the coach reflects with the teacher about the experience.

This year, LeMaster and Spruiell also have created a learning community of the MMC teach**Read more about** the principal's support for coaching in this school in the **December/January** 2007 issue of The Learning Principal.



NSDC PROFILE
KATHY SPRUIELL
CHRISTY LEMASTER

#### **KATHY SPRUIELL**

**Position:** Math coach, Simonton Elementary School, Lawrenceville, Ga.

**School district:** Gwinnett County Public Schools

**Professional history:** Taught 6th grade for six years in Jefferson County, Ala. Became math specialist at Simonton Elementary School in 2001 and later was named math coach.

Education: Earned her bachelor's degree in elementary education from Birmingham-Southern College and is working on her master's degree in elementary math education from Walden University.

Honors/accomplishments: 1995 Second Mile Teacher Award (Teacher of the Year) in Jefferson County, Ala.

**Professional service:** Has been a team leader and grade chair.

Has presented numerous times at the Georgia and National Council of Teachers of Mathematics. Presents frequently to the math specialists and coaches in her district. Serves as math leader for the cluster of Gwinnett schools that includes Simonton.

**To continue** this conversation, e-mail Kathy\_Spruiell @gwinnett.k12.ga.us

ers. Those 13 teachers meet regularly to share their experiences and inevitably spin off more ideas. "Our first meeting with them was excellent. So many ideas came out of that meeting," Spruiell said.

Both LeMaster and Spruiell express a great deal of admiration for the teachers who volunteered for the MMCs. "The teachers who volunteered to be in the math model classrooms had to be willing to be disturbed. That's hard. It was hard for them to say 'I don't know and I want help.' Teachers usually don't do that," LeMaster said.

LeMaster, who was a math coach in another building before coming to Simonton, believes the MMCs offer greater opportunities for conferencing and reflection than having a coach do model lessons in a single classroom. "When I did model lessons, I was seen as the expert, someone who would come in and do something for them. This is more reflective and collaborative.

"To be a coach, you have to build trust, no matter how much expertise you have. That takes time. Teachers have to know that you're on their side and that you understand their frustrations," LeMaster said.

Offering opportunities to observe a regular classroom teacher from the same grade level is part of the power of the MMC, LeMaster said. Coaches who don't have classroom responsibilities can quickly lose credibility with teachers, she said. "Teachers think you may know the math but you don't have the same responsibilities that I have every day in my classroom. You don't have to worry about the lunch count, you don't have to teach language arts and science and math. Regular classroom teachers have much more credibility with other classroom teachers,"

#### **CHRISTY COTHAM LeMASTER**

**Position:** Math coach, Simonton Elementary School, Lawrenceville, Ga.

**School district:** Gwinnett County Public Schools

**Professional history:** Taught 4th and 5th grade at Rock Bridge Elementary School in Gwinnett County for four years before becoming math specialist at the same school. She was math specialist at Rock Bridge

for six years before becoming math coach at Simonton.

Education: Earned her bachelor's degree in educational studies from Vanderbilt University and her master's degree and education specialist's certificate in middle grade math from Mercer University, Atlanta. She also holds a leadership certificate from Mercer University.

**Professional service:** Founder and president (2006) of

Gwinnett County Council of Teachers of Mathematics. Has presented numerous times at the Georgia and National Council of Teachers of Mathematics. Presents frequently to the math specialists and coaches in her district. PBS Mathline participant

**To continue** this conversation, e-mail LeMaster at Christy\_lemaster @gwinnett.k12.ga.us

#### **SPRUIELL:**

"If we grow them as leaders, they can go back into their grade levels and be leaders among those other teachers."

#### **LeMASTER:**

"To be a coach, you have to build trust, no matter how much expertise you have. That takes time. Teachers have to know that you're on their side and that you understand their frustrations."



NSDC PROFILE
KATHY SPRUIELL
CHRISTY LEMASTER

LeMaster said.

The MMCs help bridge that gap, LeMaster said. "When someone asks us to model a lesson, we encourage them to visit the MMC. That way, they will learn from another teacher and not totally rely on Kathy and me," she said.

LeMaster and Spruiell share a vision for the role that the MMCs teachers will play in their school. They agree that they are grooming these teachers to be teacher leaders.

"If we grow them as leaders, they can go back into their grade levels and be leaders among those other teachers," Spruiell said.

LeMaster agrees. "Success breeds success. When those MMC teachers were having success, they became storytellers. They were very vocal about getting the word out. They were telling other teachers, 'This is great. My teaching is get-

ting better. You can do this too.' That encouraged more teachers to get involved.

LeMaster embraces the concept of coaching as a way to build teaching capacity in more than just one school. "To me, an instructional coach has to maximize the talent and potential of every teacher. If I go in and fix something, that's short term. This is not just about the 24 kids they have today. If a teacher changes for the better and they have a teaching career for 10 to 15 years, they can impact 240, 250 students. I want to provide them with the tools they need for the long range. I want them to be successful no matter where they're teaching. I want them to be successful so they don't burn out. I want them all to become teacher leaders within their grade levels, their schools, their county. There's a ripple effect every time a teacher improves," she said.

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#### IMPROVING SCIENCE ACHIEVEMENT IN INCLUSIVE SCIENCE CLASSOOMS

## Including helps everyone here

BY CARLA THOMAS McCLURE

ifferentiated, peer-mediated, hands-on instruction in inclusive middle school science classrooms can generate academic gains for all students, including those with disabilities, according to research findings reported in *The Journal of Special Education*.

## What instructional strategies can improve the science achievement of students with disabilities?

Numerous studies have identified instructional strategies that can improve science achievement for students with disabilities. These include vocabulary enhancements, text adaptations, text-processing strategies, real-world problem-solving strategies, and hands-on science activities.

## What sparked researchers' interest in studying differentiated hands-on activities combined with peer tutoring?

The U.S. Department of Education has called for more research on the best ways to teach science. Researcher Margo Mastropieri identified a need for research on "the systematic implementation of significant classroom variables such as practice, application, and engaged time-on-task."

In 2005, Mastropieri and two colleagues designed an experiment to examine what happened to student achievement in science when high school students in inclusive classes spent more time in practice and application.

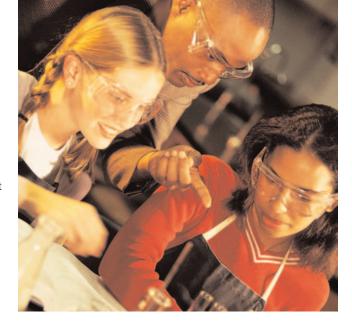
Researchers found that students in peer-mediated differentiated instruction "scored higher on the unit test than did students who received the same instruction without peer tutoring." These results

prompted Mastropieri to design a similar study, this time with 8th-grade science students.

#### How was the study conducted?

Mastropieri and six colleagues developed

materials to supplement the textbook's 12-week section on scientific investigation. For each area of study (e.g. charts and graphs), they developed three levels of materials. Level 1 activities support mastery of basic information and include supports and prompts. Level 2 requires application of information, with prompts as



needed. Level 3 requires production responses with no prompts. All activities include easy-to-follow instructions.

A randomized field trial involved eight teachers (four general education, four special education) and 213 students (44 of them classified with disabilities) in 13 classes within one school. Classrooms were randomly assigned to the control or experimental condition. In the control condition, students received traditional teacher-directed instruction — lecture, note taking, class lab activities, media presentations, and

#### EDVANTIA

Carla Thomas McClure is a staff writer at Edvantia (www.edvantia.org), a nonprofit research and development organization that works with federal, state, and local education agencies to improve student achievement.



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worksheets. In the experimental condition, students received identical teacher presentations, but peer-assisted learning replaced worksheets (teachers paired students needing assistance with higher achieving partners and directed the pair to begin with Level 1 activities, moving to Level 2 and 3 activities once proficiency was achieved). Team teaching was used in five classes, and each lead teacher taught at least one experimental and one control class.

The 12-week intervention included pretesting, teacher and student training, posttesting, and teacher and student surveys. The research team also examined end-of-year results on the science portion of the state's achievement test.

#### What were the results?

Average scores on posttests and state highstakes achievement tests were higher for students who received differentiated, peer-mediated, hands-on instruction. The differences were statistically significant, meaning they were not likely to have occurred by chance.

The researchers said they were "somewhat

surprised that an enhanced 12-week learning experience could improve end-of-year total highstakes test scores." This effect, they say, might be because the content — the scientific method included vital information that students could later apply in learning other science content.

Survey responses revealed students' preference for activities that were game-oriented. Teachers valued the experimental materials but found it challenging to devote sufficient time to them.

#### What supports might teachers need if they implement peer-mediated differentiated activities?

Teachers can be encouraged to target key concepts that, once mastered, might help students understand subsequent science instruction. Coaches may need to help teachers develop or modify differentiated science activities for peermediated groups. The activities should be aligned with the district's science curriculum and state tests. The central office can distribute success stories and materials to other science teachers in the district.



Margo Mastropieri and colleagues investigated how middle school students learn in differentiated science classrooms.

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