t³ TEACHERS TEACHING TEACHERS ™

FOR A DYNAMIC COMMUNITY OF TEACHER LEADERS

ROLE: **Resource provider**

PURPOSE: To expand teachers' use of a variety of resources to improve instruction

By Joellen Killion and Cindy Harrison

As resource providers, coaches help teachers locate information, resources, materials, equipment, and examples of best practice, delivery of instruction, assessment of student learning, or organization, or management of the classroom.

As a resource provider, a coach:
- Offers resources requested by teachers;
- Recommends resources to teachers that relate to topics the coach and teacher have discussed; and
- Shares research, best practices, or emerging trends with the school staff.

Filling the role of resource provider helps coaches develop trust and credibility with teachers. Being a resource provider is often the first step when a coach is trying to get a foot in the door of a teacher's classrooms. By providing requested or interesting resources, coaches convey to teachers that they are reliable, supportive, and trustworthy.

Coaches as resource providers may make it a regular practice to update school staff about current research and practices through presentations, electronic newsletters, or e-mails. Teachers may ask a coach to help them gather information about an instructional practice, identify reading materials for students who are

> **One in a series about the roles of the school-based coach.**

Our goal: All teachers in all schools will experience high-quality professional learning as part of their daily work.

SCENARIO:
Resource provider at work

Teachers of American history want to incorporate more literature into their classes. They have easily compiled a reading list of novels by American authors, but have difficulty identifying titles to include by authors who represent diverse perspectives about American history. They meet with Marla Jepson*, the school's instructional coach, to talk about their desire to compile a reading list of literature that reflects the history of the United States, presents diverse perspectives, and spans a wide range of students' reading ability. They explain to Jepson that students will use the reading list for several projects throughout the year and that teachers will use it to design and differentiate learning experiences,

assignments, and instructional units for students.

Jepson meets with the school librarian to identify what is available in the school library. With the librarian's help, Jepson adds to her list what is available in other school libraries in the district and in public libraries in their city. Jepson begins the long process of determining the reading level of books in the school library because she anticipates they will be the ones students access most often. She consults with English teachers and learns that they have already started a list for their core literature courses, including American literature. They are excited when Jepson agrees to share her work with them. In her annotations, Jepson adds notes to help teachers understand the reading level and the unique perspective each book presents.

Fictitious person and school

Roles of the school-based coach

- Catalyst for change
- Classroom supporter
- Curriculum specialist
- Data coach
- Instructional specialist
- Learner
- Learning facilitator
- Mentor
- **Resource provider**
- School leader

reading well above or below grade level, find alternative teaching materials to provide additional practice with particular skills, identify web sites or software to support teacher planning or student work, or recommend alternative assessment strategies for students who may not perform at their best on more traditional paper-and-pencil tests.

Coaches often work with other resource providers such as media specialists and technology coaches as well as district resource people to provide information and resources to classroom teachers.

Coaches spend a great deal of time accessing the appropriate resources for sharing with appropriate staff members. Doing so takes time, expertise, and persistence to find, synthesize, and communicate information.

Knowledge and skills

Resource providers need to know what resources are available in the school and district and how to locate information and resources. This includes knowing the formal and informal networks for accessing information. Creating and using networks of colleagues and peers to learn and share strategies that work is an important

skill for effectiveness.

Coaches must have sound research and information location skills. They need to know how to sift through research to identify necessary conditions and critical characteristics of effective practices. Using Internet search engines and finding the appropriate information efficiently are essential skills.

Coaches may coordinate teachers reading professional journals. Teachers rarely have time for professional reading, yet if their efforts are coordinated so that they can access information in an efficient way, they can all benefit from the reading. (See NSDC Tool on p. 4 for a template that coaches can use to help teachers reflect on their professional reading.)

Possessing critical analysis skills to assess the quality and appropriateness of identified resources is a must for coaches. Making the match between the resource and the teacher and his/her students is essential if teachers are to use the information generated by the coach.

Coaches must be able to summarize research findings and then identify practical applications of this information for classroom practice if teachers are to use the important information. In addition, coaches use synthesis skills to consider

how to integrate new information and research into current practices at school.

As resource providers, coaches help teachers share best practices. Teachers may conduct formal action research projects or less formally monitor their own practices. Coaches can facilitate sharing by using a research sharing protocol.

Coaches often employ a variety of communication and dissemination skills to share information and resources. They sometimes produce regular research summaries for staff.

Challenges

Coaches in the role of resource provider face a number of challenges. The first one and often the one that is hardest to overcome is spending too much time in this role and becoming more of a gofer than a coach. Teachers can easily become dependent on coaches who play this non-intrusive role. Teachers may find it easier to request resources from the coach than to search for themselves. Coaches, in an attempt to be supportive, may not know when to move from the resource provider role to another role that would increase the likelihood that classroom practice changes. If coaches stay in this role too long, teachers often see that this is the only thing the coach can do and may begin to treat the coach like a support person rather than an equal. As coaches try to move out of this role, teachers may become frustrated that they no longer have a person to access resources for them. Maintaining the parts of this role that impact classroom thinking about teaching and learning are essential to impacting the culture of the school.

Keeping abreast of numerous changes and resources in education is another challenge to coaches. The constant stream of new information, strategies, resources, ideas, and research make it difficult for the coach to focus his or her research on the information that aligns most closely with the identified needs within the schools. Connecting with others who do this same work often saves individual coaches hours and recreat-

ing the wheel. Creating forums and opportunities for resource personnel to come together and share what each has created so that others can use the same resources is important so that coaches are not burned out.

Another challenge is coupling resource providing with helping teachers learn how to access their own resources. Working with an individual teacher and helping him or her think through a unit or need and then assisting the teacher in figuring out where to go to get the necessary information is a way to build capacity in others. Implementing the principle of gradual release is an important skill in this role. ◆

**YOU'VE READ THE EXCERPT,
NOW READ THE BOOK**

Taking the lead: New roles for teachers and school-based coaches
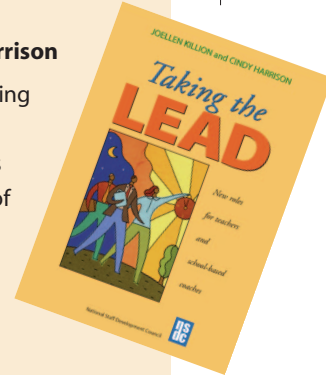**By Joellen Killion and Cindy Harrison**

This guide to school-based coaching is written by two educators who have developed coaching models and worked closely with dozens of coaches. They explore the complex, multifaceted roles played by teacher leaders and school-based coaches, as well as examining district and school expectations, hiring practices, and deployment of these educators.

A companion CD-ROM includes dozens of tools (including the one here on p. 4) that teacher leaders and school-based coaches can use in their work. One of those tools is a new set of Innovation Configurations for school-based coaches. *NSDC, 2006. Item B352.*
Price: $36, members; $45, nonmembers

**Order through NSDC's Online Bookstore,
store.nsdc.org**

Chief among challenges of the resource provider is getting caught in this role and becoming more gofer than coach.

COACHES CAN HELP TEACHERS PROCESS THEIR PROFESSIONAL READING. SEE NSDC TOOL ON P. 4.

Journal/research
REFLECTION SHEET

Author: _____

Title: _____

Source: _____

Date: _____ **Volume/Issue:** _____ **Pages:** _____

BEFORE READING THE TEXT, WRITE TWO OR THREE PREVIEW QUESTIONS THAT YOU WANT
TO ANSWER ABOUT THE TEXT.

1. _____

2. _____

3. _____

AFTER READING THE TEXT, COMPLETE EACH SECTION.

What are the key ideas presented?
_____
_____
_____

What are the answers to your three preview questions?

1. _____

2. _____

3. _____

What was confusing?
_____
_____

What do you want to know more about?
_____
_____

**What are the implications for teaching and learning? Write three to four sentences about what these
ideas suggest for our teaching practice.**
_____
_____
_____
_____

Coaches may coordinate teachers' reading of professional journals. This tool is a sample template for recording and sharing teachers' professional reading.

From *Taking the lead: New roles for teachers and school-based coaches* by Joellen Killion and Cindy Harrison, published by NSDC, 2006.

Be like a virus and connect

My pleasure-reading list looks like few others that I know! Leaning heavily towards titles intimidating in both topic and length, I'm currently wrapped up in an early 20th century biography craze. I've plowed through tomes on Truman, Stalin, and Chairman Mao in the past few months. Understanding the motivations of leaders, seeing defining moments in history, and making connections to today drives me to the nonfiction section of the bookstore time and again.

Character in the face of crisis drew me towards the title I just finished. Written by John Barry, *The Great Influenza* documents the efforts of America's first medical pioneers to diagnose and treat the Spanish flu — a worldwide pandemic that killed more people in 25 weeks of 1918 and 1919 than AIDS has killed in 25 years. Faced with a world war, a buckling medical infrastructure, few resources, and a government in denial, courageous doctors and medical researchers risked lives and reputations against almost overwhelming odds to search for causes and cures.

But what caught my professional attention was the medical description of how the influenza virus — one of nature's most efficient creations — functions. Consisting of a sphere-shaped base covered by spikes of a substance called hemagglutinin, this virus travels through the body bumping into other cells looking for a "match." Most cells have little in common structurally with influenza, passing harmlessly and moving on.

But the sialic acids on the outside of respiratory cells are a near perfect match for the hemagglutinin spikes surrounding the influenza virus. When the two come into contact with one another, the virus bonds with respiratory cells like a hand fits a glove and begins its work. Until it finds sialic acids, influenza is horribly inefficient — and essentially useless. After bonding with respiratory cells, it becomes remarkably communicable.

In many ways, our work as teacher leaders mirrors the work of the influenza virus. We can spend months making contact with "cells" in our schools that aren't matches — and our work is as inefficient as hemagglutinin without sialic acid. Personally and professionally, we are weakened and isolated.

Once we find that match — our sialic acid, so to speak — we, too, bond and the results are amazing. A mental synergy consumes professionals "connected" in the work of education. Ideas flow, mutating and transforming into increasingly perfect forms with each new exposure. Instructional practices improve and results are amplified, quickly spreading throughout teams and grade levels. Occasionally entire schools become infected, lucky enough to have like-minded professionals across grade levels and departments that "find" each other in the incredibly complex systems that are our buildings.

In the upcoming weeks, spend your energies trying to find your sialic acids rather than forcing ideas onto the cells that are not a match. Once you do, no one will be able to stop you. The combined energy that you create will be contagious!

Of course, some people are bound to get sick of you, but what fun would professional infection be if they didn't? ◆

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Join the conversation with Bill by visiting www.nsdc.org/blog/ and offering your opinion. Bill posts his provocative ideas frequently — be sure to return often.

No. 1 resource has a human face

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

Professional development requires resources. In NSDC's Standards for Staff Development, resources include time and human and fiscal resources to support professional learning. When coaches serve on school improvement teams or school leadership teams, they have opportunities to influence decisions related to creating time for collaborative professional learning during the school day. In addition, they can recommend how financial resources are allocated to support professional development. On a day-to-day basis, however, coaches provide resources to teachers in every interaction they have. Coaches provide both instructional and professional resources to help teachers strengthen teaching and student learning.

Coaches are the resource and they also provide resources. Coaching as an investment, the type of resources coaches provide, how to help teachers find their own resources, and how to reduce teachers' dependence on coach-provided resources are the focus of this column.

Coaching as a resource

A school or district decision to invest in coaching and place a coach in a school is both a significant fiscal and human commitment to professional development. When districts invest in coaches, they demonstrate the strong belief that student learning increases through quality teaching. The investment a school or district makes in a coach is the cost of a full-time teacher. Since most coaches are experienced teachers, this figure is often near the upper end of the teacher salary schedule.

Coaching is an investment in teacher development and student learning. The investment in coaching is substantial and schools and districts expect a significant return on their investment in

terms of student-academic success. When coaches' work is focused on teaching and learning and when coaches are carefully selected, prepared, and placed, the return on the investment is realized. If any of these elements are missing, the return on the investment in coaching may be limited.

Coaches are a professional development resource whose work is centered on assisting teachers to refine their content knowledge, pedagogy, and assessment strategies. They help teachers use data to identify student-learning needs and to find appropriate interventions to address those needs. In their roles as resource provider, mentor, learning facilitator, classroom supporter, curriculum specialist, instructional specialist, data coach, school leader, catalyst for change, and learner, coaches provide a wide range of support to meet every teacher's needs.

RESOURCES
Staff development that improves the learning of all students requires resources to support adult learning and collaboration.

Coaches as resource providers

Unlike a principal or central office staff, coaches do not provide monetary resources or time to teachers. However, they can help teachers access resources, identify the best resources to buy with limited school funds, and share vast resources from their personal professional or classroom libraries.

Teachers have endless access to resources on the web and through interlibrary loans. Yet, the challenge teachers have is finding what will be useful for their particular individual and classroom needs. Teachers just don't have time to

spend searching the web for high-quality, standards-based, or age-appropriate materials for their classroom. Coaches can help teachers in several ways.

First, coaches can do some searching for teachers once they have specific needs identified. Getting the needs identified requires time to talk with the teacher to learn what standard they are addressing, what developmental needs to consider, and how the resources will be used, e.g., by the teacher for his or her own use or with students. Whether this search is a physical one (in the school library or professional resources, in the district professional resources, or in a local library) or whether the search is online using an online search engine or online virtual library, the search must be focused on specific needs. If teachers are uncertain about what they want, coaches can use clarifying questions to help teachers gain clarity. (See box at right.)

Frequently, a teacher is not able to be as specific as these questions might suggest. A coach will want to avoid searching for general resources that might not be helpful to the teacher. If the teacher is uncertain, the coach might suggest that the teacher do a preliminary search to identify the type of resources desired and the area of resources before the coach conducts his or her search.

The coach, too, can be the resource. By modeling instructional strategies, sharing books from his or her own professional library, offering feedback to a teacher after visiting his or her classroom. Coaches can co-teach a lesson, engage teachers in a book or lesson study, facilitate a tuning protocol, or offer many other services that can be resources to teachers.

Sometimes, rather than finding resources for teachers, the coach might teach teachers how to do their own searches for appropriate resources. This might include short and practical strategies for using web-based search engines; accessing library resources in the school, district, community, or interlibrary loan programs; and identifying and accessing community resources, such as speakers' bureaus, professionals who volunteer in schools, district resource staff, or college and university faculty.

When a coach empowers teachers by helping them conduct their own resource searches, they provide them with limitless possibilities for enriching their teaching with practical and authentic instructional aids. Coaches can model for teachers how to use these resources and then engage teachers in an authentic search and provide coaching and support to ensure teachers know how to conduct searches independently. Coaches might also want to share with teachers lists of web sites related to each of the disciplines. Many district-level technology coordinators have collections of appropriate web sites for teacher and student use and even have these sites aligned with the district's curriculum standards. Rather than compiling these sites, coaches can collect lists of appropriate sites and make sure teachers know about them.

When coaches help teachers strengthen their research skills, they decrease teachers' dependence on the coach to be a resource provider. Teachers, with increased competence, will search for their own resources. Armed with the knowledge of how to use research skills and tools, teachers will be more independent in their resource search. Working collaboratively with their colleagues, teachers may become more interdependent in their resource search processes.

Most teachers agree that their coaches are indispensable resources. Coaches work hard to demonstrate their integrity, trustworthiness, and credibility. As a resource for teachers, coaches make important decisions each day when they determine where to invest their expertise to improve teaching and student learning. ◆

Questions to help teachers describe resources they need from the coach

- What **standard**(s) will you be teaching when you use these resources? What specific **knowledge and skills** will you want students to learn when you use these resources?

- What **type of resources** do you want, e.g., print for classroom display, web-based for use by students, web-based or print to deepen my content knowledge?

- **Who** will use the resources, you or the students?

- **How** will the resources be used, e.g., for background information, to develop student instructional materials, to deepen my own knowledge about this concept, to consider ways to differentiate the concepts for students, by students in an inquiry lesson, by students for an enrichment activity, etc.?

- What **reading level** is most appropriate for the resources?

- **When** will you use these resources?

WITH THIS COACH,
THE TOPIC ALWAYS TURNS BACK TO INSTRUCTION

By Tracy Crow

When schools aren't succeeding, school and district leaders need to make big changes; Johnston High School in Austin (Texas) Independent School District is an example of such a school. Johnston is now in its fourth year as "academically unacceptable."

As a second-year school-based instructional science coach, Luis Salinas is a key player in the district's improvement plan. Other crucial members of this improvement team are a full-time instructional math coach for and part-time assistants for language arts and literacy. In addition, Johnston is also undergoing a restructuring initiative, due in part to a redesign grant from the Bill & Melinda Gates Foundation.

Before becoming coach, Salinas taught physics and physical science classes at Johnston for 16 years and served three years as a district-level science specialist. He "felt removed" from teaching in a central office position and was happy to work with the students and teachers at Johnston again. At the same time that he started his coach position at Johnston, Salinas began a graduate program in science education at the University of Texas at Austin.

His experience at the school made the transition to the coach role relatively seamless. "They have accepted me," Salinas noted. "If they see there is value in having me in this position, then they accept me."

Salinas is quite clear about his priorities. "I work to turn the conversation back to instruction, always. The conversation often turns to the kids and their home lives or their lack of preparation.

Photo by SARAH MULVANEY

Luis Salinas works with science teacher Meri Bowie.

I know all of that is frustrating, but instruction is the one thing we have control over."

The strict focus on curriculum, instruction, and assessment comes from the school's leadership. Johnston principal Celina Estrada-Thomas meets weekly with the school-based coaches, the academy directors, and often the school librarian. Together, they examine student data, talk about upcoming professional development, and work to overcome their academic challenges. Salinas sees these meetings as an important element of his professional growth and support.

Estrada-Thomas also supports the school-based coaches protecting them from non-instructional duties, Salinas said. "Before I started this, I knew several people who were instructional coaches, and they had all of these non-instructional duties. I was dreading those 'other duties,'" he remembers.

Johnston's academic team emphasizes backward design in their curriculum planning. Through this approach, teachers determine desired student results or goal, how they would expect students to demonstrate their understanding, and how and what they should teach. Salinas spends a lot of his time on this work – mapping out assessments, aligning curriculum with target goals, and gathering data from many sources to generate student profiles.

This work means Salinas spends his time in discussions with teachers, leading them through reflection about their work, and working with groups that are looking together at student work. He generally facilitates professional development at a departmental level. For example, he recently worked with the biology teachers for a day examining state standards and aligning curriculum with assessments. He also works individually with teachers who are struggling.

Many of his discussions with teachers are informal hallway chats about what is happening in classrooms. He conducts walk-throughs and then talks with teachers. "I work toward keeping my suggestions constructive and geared toward improving 'the next time,'" Salinas said.

Johnston's results are promising. In 2006, the school made significant gains on the science portion of the Texas Assessment of Knowledge and Skills but is still underperforming in one

area. "I see a lot of progress. I have so much confidence that students are learning science every day. To me, that's just one measure of progress," Salinas said.

Salinas's greatest challenge right now is to avoid feeling overwhelmed. "The stakes are very high. We may get closed down next year. When that threat is looming, the work can be stressful," he said.

"We're going to see dramatic changes – I just don't know if it will be enough," said Salinas. "We're continuing the work. I think we're doing the right things. If we are allowed to continue, we'll see the payoff." ◆

"The conversation often turns to the kids and their home lives or their lack of preparation. I know all of that is frustrating, but instruction is the one thing we have control over."

— Luis Salinas

New math concept? To teach it, show it

By Carla Thomas McClure

The way teachers introduce new topics in mathematics can influence student achievement, according to a study published in *Evaluation Review.* Study results suggest that an effective method is a problem-solving demonstration.

How did the researchers address this topic?

Citing a lack of research, Xin Ma and Constantinos Papanastasiou investigated the relationship between student achievement and the instructional methods used to introduce new topics in mathematics. They analyzed Canadian data from the Third International Mathematics and Science Study (TIMSS), which included a questionnaire that asked students to indicate how often their math teachers used one of six common instructional methods to begin a new topic. Using a stratified sampling procedure, researchers selected an 8th-grade class from each of 385 schools; TIMSS survey results and math test scores of 8,770 students were included in the data sample.

Why did the researchers use Canadian TIMSS data?

Canada has no federal department of education. The absence of nationally unified curricular and instructional standards made it likely that the data sample would include a wide variety of instructional formats.

How did they compare the effectiveness of various instructional methods?

The TIMSS student questionnaire named six instructional methods (see box, p. 11). Students were asked to indicate how often (almost always, pretty often, once in a while, or never) their math teachers used each method to introduce new top-

ics. Researchers analyzed student survey responses and student performance in mathematics as a whole, algebra, data analysis, fractions, geometry, and measurement. They used various individual, family, and school variables to control for teacher instructional effect on student performance.

What were the study results?

The researchers concluded that the way mathematics teachers introduce new topics affects student learning and achievement. The most effective method was for the teacher to demonstrate how to solve a well-chosen example. The researchers suggest that such examples "create correct perceptions and outline correct procedures," which helps students later on as they develop understanding of the new topic. Of the six methods studied, this was the only one that demonstrated a positive instructional effect on student mathematics performance when used frequently. The least effective methods were having the teacher explain the rules and definitions and having students look at the textbook while the teacher talks about it.

Methods that were found not effective when used excessively to introduce a new math topic were (1) discussing a practical or story problem related to everyday life, (2) working together in pairs or small groups on a problem project, and (3) having the teacher ask students what they know related to the new topic.

Any surprises?

Yes. This study suggests that it's possible to "overuse" the discussion of practical or story problems when introducing a new math topic. Student performance was positively affected in

all mathematical areas when this method was used once in a while but negatively affected when teachers "almost always" used it.

Do the researchers recommend that teachers always use a problem-solving demonstration to introduce new topics?

No. It's true that this study found a strong instructional effect associated with teachers using this method to begin a new topic "pretty often." However, the findings indicate that a little variety can be beneficial. The researchers advise teachers to consider carefully which method best suits the new topic and to match the method to student needs, interests, and abilities.

Reference

Ma, X. & Papanastasiou, C. (2006). How to begin a new topic in mathematics. *Evaluation Review, 30*, 451-480.◆

6 INSTRUCTIONAL METHODS STUDIED

MOST EFFECTIVE

1. Teacher demonstrates well-chosen example.

NOT EFFECTIVE

2. Class discusses practical or story problem related to everyday life.

3. Students work in groups or pairs.

4. Teacher asks students what they know about the topic.

LEAST EFFECTIVE

5. Teacher explains rules and definitions.

6. Students look at textbook while teacher explains.

The study also found that a little variety in presentation can be beneficial.