Marshall Memo 324

A Weekly Round-up of Important Ideas and Research in K-12 Education
February 22, 2010

In This Issue:

Quotes of the Week

"Like adults, students want a significant reason to turn off the alarm clock in the morning, get out of bed, go to work or school, and learn."
Cathryn Berger Kaye (see item #7)

"When a teacher increases homework from 10 math problems to 50 math problems, or increases a research paper assignment from three pages to 10 pages, or increases reading load from six books per year to eight books per year, those are increases in Brain RPM, not Brain Torque."
Kevin St. Jarre (see item #5)

"Don't herd students like cattle down a chute on the way to the solution you want. Allow for the possibility of a truly creative and unexpected solution."
Kevin St. Jarre (*ibid*.)

"Slower-paced instruction is a sure-fire recipe for falling further behind."
Steven Shaw (see item #3)

"If the school principal is not viewed as the person who is most concerned about academic achievement in the school, then who will be?"
Vance Dalzin (see item #6)

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1. How Interim Assessments Failed in Two Pennsylvania Districts

In this troubling article in *CPRE (Consortium for Policy Research in Education) Policy Briefs*, University of Pennsylvania researchers Margaret Goetz, Leslie Nabors Olay, and Matthew Roggan report how 45 third- and fifth-grade teachers in Philadelphia and an unnamed suburb used math interim assessments during the 2006-07 school year. The authors point out that much of the enthusiasm for interim assessments over the last decade stems from research on formative (on-the-spot) assessments, but there is relatively little evidence on how interim (a.k.a. benchmark or periodic) assessments are used by teachers, principals, and districts and whether they improve teaching and learning. The purpose of the study was to fill this gap in the research.

The research team found that in many ways, the two districts were "doing things right" according to the interim assessment playbook. Both districts in the study administered assessments every six weeks, made sure they were aligned to the curriculum, set strong expectations for teachers and principals to use data from the tests, generated reasonably accessible reports, and allocated time for teachers to analyze the results, plan for follow-up, and re-teach. Principals were coached to identify the areas in which students had the most difficulty, model the process of analyzing the data, and support teachers in following up with students. Teachers in both districts had assistance with analysis and classroom re-teaching, but the suburban schools had a good deal more instructional coaching and classroom support than the Philadelphia schools.

Up to a point, the interim assessments appeared to be helpful. Teachers looked at the results and followed up by re-teaching items with which students had difficulty and helping struggling students.

But the overall finding of the study was that the assessments did little or nothing to improve teaching and learning. "While teachers accessed and analyzed interim assessment data," say the researchers, "we found that this information did not substantially change their instructional and assessment practice. Teachers used interim assessment results largely to decide what content to re-teach and to whom, but not to make fundamental changes in the way that this content or these students were taught. Teachers' use of classroom-based formative assessment did not necessarily lead to changes in instructional strategies either… The interim assessment data influenced *what* teachers chose to re-teach, but not necessarily *how* to teach it."

In fact, most teachers re-taught mathematical procedures the same way they had before, went over test items with students, and repeated earlier instruction of concepts. Only teachers who had a deeper conceptual understanding of the mathematics involved used the interim assessment data (and other less formal assessments) to understand why students were having difficulty and rethink the way they taught concepts and procedures. Thus, the most powerful aspect of interim assessments was lost in most classrooms. Here is the researchers' analysis of why this occurred:

• *Poor test quality* – The study found that the interim assessments didn't do a good job of revealing what students understood and didn't understand, and were especially weak at using questions and distracters to identify common student misunderstandings and misconceptions that could be attacked in the classroom.

• *Teachers' knowledge gaps* – The researchers showed teachers incorrect student answers to test items and got a wide variety of explanations as to what students might have been thinking, all the way from procedural to conceptual, with many teachers missing the boat.

• *Teachers' diagnostic ability* – The researchers analyzed what teachers looked for in three different kinds of assessments – on-the-spot, teacher-made, and interim – and found that teachers who looked for students' conceptual understanding on one kind of assessment looked for it in all three kinds, and vice-versa with those who saw only procedural issues. "This suggests that analytic or diagnostic capacity underlies effective formative assessment, regardless of whether those assessments are embedded within instruction, developed by teachers, or externally designed," say the researchers. In other words, the interim assessments were helpful only if teachers were already trained or inclined to look at students' work in that way.

• *Not taking responsibility for improving instruction* – Many teachers attributed disappointing student performance on interim assessments to factors outside their immediate control, including weak reading ability, lack of background knowledge, inability to maintain attention, and low levels of English language proficiency. They didn't take the assessment results as a cue to search for new and more effective ways to teach.

Goetz, Olay, and Roggan close with the following recommendations for the more effective use of interim assessments:

- Use high-quality tests that reveal students' thought process through well-written questions and distracters.
- Design interim assessments to serve a single purpose rather than trying to use the same tests to diagnose, evaluate, and predict performance.
- Show instructional coaches and teachers the best ways to analyze and follow up on interim assessments.
- Give teachers interim assessment results in a timely manner and don't bog them down in data entry and accessing information on a website.
- Give teacher teams time in their schedules to analyze interim assessment results and discuss potential instructional responses.

- Use professional development to build teachers' pedagogical content knowledge and help them better understand the conceptual side of subject matter, diagnose student difficulties, and adapt their instructional strategies in appropriate ways.
- Help teachers get insights on students' thinking from several sources, including on-the-spot classroom assessments (for example, dry-erase boards and exit tickets).
- Get teacher teams using an iterative process in which they look at student work with content-area experts, return to their classrooms to try out a different approach, then reconvene to discuss how it worked. "It is this kind of ongoing, supported capacity-building," conclude the authors, "that gives teachers the best chance at turning assessment results into increased student learning."

"Can Interim Assessments Be Used for Instructional Change?" by Margaret Goetz, Leslie Nabors Olay, and Matthew Roggan in *CPRE Policy Briefs*, December 2009; the full report can be accessed by Googling the full title.

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2. Three Ways to Handle Discipline

In this thoughtful article in *Educational Researcher*, researchers David Ocher, George Bear, Jeffrey Sprague, and Walter Doyle describe three approaches to reducing disruptive and antisocial student behavior:

• *Ecological* – This approach focuses on effective classroom teaching as the best way to prevent misbehavior from occurring in the first place. A school day can be seen as a series of 10- to 20-minute segments, each with a characteristic "vector" involving the content being taught, what the teacher does, resources and props, and students' roles. The teacher's core management task, according to the ecological approach, is creating direction, momentum, and energy in each segment so that students are engaged and misbehavior is infrequent and minor and can be nipped in the bud with a "Shh" or a look.

Creating this kind of classroom environment is not easy. "Teachers accomplish this," say the authors, "by defining activity segments, introducing them into the environment, inviting and socializing students to participate, and monitoring and adjusting enactment over time. This task is collaborative: the teacher and students jointly construct classroom order. The difficulty of the task is related to the complexity of the activities a teacher is trying to enact, the number of students in a class, time constraints, the demands of the work assigned to students, the activity and willingness of students to engage in these activities, the social and emotional capacities of students, the quality of the relationship between and among teachers and students, and seasonal variations and distractions."

Although there is little research on the ecological approach, the authors say that it's logical that well-managed classrooms in which students are engaged in learning contribute to a school's overall climate. "If classroom activities lack holding power," they say, "it is unlikely that school wide discipline will make up for this deficiency. At the same time, for the ecological approach to be effective, students must come to school ready to attend and to be

engaged. This is rarely possible in chaotic, unsafe, or alienating schools, or when students struggle with barriers to learning."

• *School wide positive behavioral supports* – The second approach emphasizes developing systems to prevent misbehavior and manage student behavior by communicating and teaching rules and rewarding student compliance. The theory, say the authors, is that when adults in the school "actively teach, using modeling and role playing, and reward positive behaviors related to compliance with adult requests, academic effort, and safe behavior, the proportion of students with mild and serious behavior problems will be reduced and the school's overall climate will improve."

This approach uses three tiers: school wide rules and interventions (with a clear delineation of what classroom teachers should handle versus what the office should handle); selective interventions for students who have difficulty following rules; and focused actions for the most chronically and intensely at-risk students. There are also faculty discussions of patterns of misbehavior and how to use data to improve climate and discipline.

Research says the school wide positive behavior supports approach prevents many discipline problems if it includes:

- A small number of positively stated rules and expectations;
- Teaching appropriate social behavior;
- Monitoring compliance with rules and expectations;
- Consistently enforcing rule violations with mild negative consequences;
- Providing a rich schedule of positive reinforcement for appropriate social behavior;
- Supplementing all this with classroom interventions and individualized support for students with the most serious challenges.

With these components, school wide positive behavior supports can result in up to a 50 percent reduction in discipline referrals over a three-year period.

• *Social-emotional learning* – The third approach emphasizes developing students' self-discipline by teaching self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, deemphasizing rewards and punishments in favor of supportive teacher-student relationships and student responsibility. Some schools use packaged programs, others integrate content throughout the existing curriculum, and there are often home-school and service-learning components.

Studies have found specific social-emotional programs to be effective, including PATHS (Providing Alternative Thinking Strategies), Second Step, Steps to Respect, the Seattle Social Development Program, and Caring School Communities (formerly the Child Development Project).

The authors conclude that each of these approaches has strong and weak points and the best bet is to combine all three, striving to include these key characteristics:

- Promoting shared values on the mission, purpose, and traditions of the school;
- Establishing the four conditions for learning: emotional and physical safety, connectedness, authentic challenges, and a responsible peer climate;

- Facilitating these with four types of student support: positive behavioral support, supportive relationships, engaging and supportive teaching, and social-emotional learning (promoting prosaically behavior);
- Providing a caring, nurturing climate with collegial relationships among adults and students;
- Aligning all these components throughout the school;
- Collaborating with families;
- Building cultural and linguistic competence and responsiveness;
- Responding to the needs of students with substantive mental-health needs.

"How Can We Improve School Discipline?" by David Ocher, George Bear, Jeffrey Sprague, and Walter Doyle in *Educational Researcher*, January/February 2010 (Vol. 39, #1, p. 48-58), no e-link available; Ocher can be reached at dosher@air.org.

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3. Helping Slow Learners Succeed

In this *Principal Leadership* article, McGill University professor Steven Shaw focuses on slow learners, many of whom, he says, fall through "one of the largest and most pervasive cracks in the educational system." Students with borderline intelligence, who make up about 14 percent of the student population, don't quality for special education but often do poorly in regular classrooms and high-stakes tests. "Standard systems and supports are often ineffective – even counterproductive – because they fail to meet students' specific learning needs and instead create a cycle of failure," says Shaw. "By the time many of these students get to high school, their academic difficulties and related self-perceptions and attitudes toward learning are entrenched." They are disproportionately kept back, get in trouble, drop out, and are underemployed, unemployed, or incarcerated.

Still, many slow learners graduate from high school and complete postsecondary education. Shaw lists some keys to success:

- Making sure they have close relationships with one or two staff members;
- Maximizing academically engaged time and providing extra time on task;
- Breaking down lessons and tasks into manageable chunks;
- Presenting information concretely versus abstractly and relating it to real-world experiences;
- Using hands-on activities and computer-assisted instruction to reinforce learning;
- Helping students relate new material to previous learning and organize it for effective memory storage;
- Providing repetition and frequent practice of discrete skills applied to different challenges;
- Helping students generalize skills and knowledge and apply them to new situations;
- Providing a variety of ways to demonstrate competence;
- Pairing students with peer mentors;
- Helping them set long-term goals and manage their time;

- Helping them develop academic motivation by getting them involved in activities they enjoy and in which they are successful;
- Maintaining high expectations and rewarding genuine effort.

It's a myth that slow learners need slow-paced instruction, says Shaw. "Slower-paced instruction is a sure-fire recipe for falling further behind," he says. "Students with borderline intellectual functioning require more practice opportunities in the same amount of time as their average-ability peers. An appropriately paced classroom is one that is well organized, that uses computer-assisted instruction, and is taught by a teacher who has high expectations for rapid work completion. This type of environment enables slow learners to learn the discrete facts they need to know to overcome their limitations in generalization. Computer-assisted instruction makes learning basic skills automatic, which is essential to gaining fluency."

"Rescuing Students from the Slow Learner Trap" by Steven Shaw in *Principal Leadership*, February 2010 (Vol. 10, #6, p. 12-16), no e-link available

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4. Increasing the Amount of Informational Reading in Primary Classrooms

In this *Kappan* article, Michigan State University/East Lansing professor Nell Duke reports that U.S. ten-year-olds score considerably lower than their counterparts in other countries on informational versus literary reading comprehension. In fact, American students have the biggest achievement gap of any country between these two types of reading achievement. The reason, Duke believes, is that over 90 percent of the books and other materials in American first-grade classrooms are literary, only 2.6 percent of the material on classroom walls and other surfaces is informational, and only 3.6 minutes a day are devoted to informational texts – in low-SES classrooms it's 1.9 minutes a day.

But shouldn't primary-grade teachers be focusing on decoding, and aren't informational texts too hard for students this young? Not so, says Duke. First graders who are exposed to more informational texts do just as well at developing decoding and spelling skills, and they need the vocabulary and knowledge contained in informational texts to become better readers. The 2009 NAEP Framework said that students should be getting 50 percent informational passages by fourth grade, 55 percent by eighth grade, and 70 percent by twelfth grade.

What's the best way for primary-grade teachers to boost informational literacy? Duke says that the same methods that work with literature are effective with informational texts:

- Having lots of informational material in the classroom library and on the walls;
- Reading material aloud;
- Explicitly teaching skills associated with informational texts, including compare-contrast and cause-and-effect;
- Using real-world texts for real-world reasons (versus just worksheets on vocabulary and chapter material), for example, a third-grade class in Michigan corresponding with a class in Costa Rica comparing and contrasting their weather, and a class reading and writing to explain why the tadpoles in their aquarium died;

- Fostering motivation by embedding reading instruction in a conceptual theme, for example, animal survival processes, with students engaging in reading, writing, and hands-on activities and then presenting their findings to an interested audience. This is called Concept-Oriented Reading Instruction (CORI) – http://www.cori.umd.edu – the main elements of which are thematic units, relevance, student choices, student goal-setting, and collaboration.

"The Real-World Reading and Writing U.S. Children Need" by Nell Duke in *Phi Delta Kappan*, February 2010 (Vol. 91, #5, p. 68-71), http://www.pdkintl.org

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5. How to Maximize "Brain Torque" in Classrooms

In this clever *Kappan* article, author Kevin St. Jarre says that different types of student brain activity can be likened to an automobile engine's RPM (revolutions per minute) and its torque (the force it exerts on the driveshaft). "When a teacher increases homework from 10 math problems to 50 math problems," says St. Jarre, "or increases a research paper assignment from three pages to 10 pages, or increases reading load from six books per year to eight books per year, those are increases in Brain RPM, not Brain Torque. Some might see value in such 'practice,' but it is Brain Torque that allows students to succeed in college. Brain RPM is about increasing the speed at which repetitive acts can be accomplished. Brain Torque is about the brain doing heavy work, deep and complex thinking."

How can we increase Brain Torque? First, says St. Jarre, by relinquishing total control – which isn't the same as totally relinquishing control. "Teachers spend too much of their time trying to control kids and outcomes," he says. Rather than using grades as instruments of control, it's better to use them to focus on whether students are learning and giving useful feedback.

Second, by auditing our teaching – checking each learning task for how much Brain RPM versus Brain Torque it involves. "Create problems to solve that allow for unexpected creative problem solving," says St. Jarre. "Don't herd students like cattle down a chute on the way to the solution you want. Allow for the possibility of a truly creative and unexpected solution. Ask yourself, "Could I replace these 50 math problems with eight really effective high-Brain-Torque problems?"

Third, involve your students in creating problems to solve. "Kids *love* to complicate things," says St. Jarre. "Let them. They will challenge each other. Not only will the solutions be unexpected, you might be surprised by the assessment they collaboratively create. And if you catch yourself thinking, 'No, this assessment will be too hard,' you should keep your mouth shut. If you mean too challenging for the students, let them try it. If you mean too difficult to score, you're probably still trying to control too much of the learning experience."

Fourth, make problems open-ended and don't micro-manage student learning. "Get away from repetition and memorization because those are examples of Brain RPM," says St. Jarre. "Move into complex problem solving in which there are opportunities for students to

perform beyond the way they were taught and, instead, to adapt what they've learned to a situation with which they're completely unfamiliar. This requires Brain Torque."

"Brain Torque" by Kevin St. Jarre in *Phi Delta Kappan*, February 2010 (Vol. 91, #5, p. 80), http://www.pdkintl.org

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6. What's Most Important in Your High School?

"Are you viewed as someone who is visible around student learning or who is seen just in your office or at athletic events?" asks Wisconsin high-school principal Vance Dalzin in this pointed *Principal Leadership* article. "I understand and respect that the comprehensive high school is an important part of U.S. culture and that it encompasses a lot more than just academics. And I agree that it should… [But] I implore school principals to ensure that the image of their roles and their schools convey the message that academics come first. If the school principal is not viewed as the person who is most concerned about academic achievement in the school, then who will be?

He goes on to suggest a number of ways that school leaders can strike a balance between athletics and academics:

• *Displays* – In addition to athletic hoopla in the entry hall of the school, there should be academic slogans, pictures of valedictorians and National Merit finalists, honor roll lists, and academic bowl and math team awards.

• *The leader* – "What does your office look like?" asks Dalzin. "Does it send the message, 'I am an academic leader'?" Academic degrees should be on display, as well as professional books and journals that you actually read. Principals should attend academic award ceremonies to signal their importance, and make frequent informal classroom visits showing a keen interest in students' work and what they are learning.

• *Celebrations* – "Celebrating individual and collective academic accomplishment should be a distinct part of the school's culture," says Dalzin – academic pep rallies before state tests, celebrations of achievement gains, morning PA announcements on accomplishments, academic "letters", team T-shirts for academic bowls, math meets, debates, other scholastic team events, and recognition for staff members who advise academic teams.

• *Time* – "Do you guard instructional time?" asks Dalzin. "Do you try to prevent your school from being consumed by homecoming, prom, nonacademic field trips, and other distracters to the learning day?"

• *Publications* – The school's newspaper, parent newsletter, website, and yearbook should celebrate academic excellence and progress and make clear that learning is the school's number one mission.

• *Meetings* – "Many of us are frustrated by the fact that we spend a lot of time in meetings that have little focus on academic achievement," says Dalzin. "We can make it a priority to ensure that academic agenda items are prevalent in every aspect of the school

community." This includes staff meetings, parent organization meetings, student council meetings, and administrative team meetings.

"Cultivating an Academic Image" by Vance Dalzin in *Principal Leadership*, February 2010 (Vol. 10, #6, p. 64-67), no e-link available

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7. Service Learning in Action

"Like adults, students want a significant reason to turn off the alarm clock in the morning, get out of bed, go to work or school, and learn," says Kathryn Berger Kaye in this *Principal Leadership* article. The answer to the frequently asked questions, *Why am I learning this?* and *Why am I teaching this?*, she says, is well-crafted, well-aligned service-learning experiences. Some examples:

- Humanities and science teachers at High Tech High Media Arts School in San Diego, CA had students conduct sophisticated water testing and develop media campaigns to encourage water protection and conservation.
- AP American History students in Albion, NY dressed in period costumes and led 700 local residents on "ghost tours" of the local cemetery to connect the past with the present and build community knowledge and pride.
- Santa Barbara (CA) High School students got certified by the IRS and prepared 600 tax returns for low-income families free of charge.
- Mora (MN) High School students renovated and operated a local theater's concession area that had been unused for 20 years.
- Students at Preble High School in Green Bay, WI, wrote a book about their community with photographs and interviews about local government, history, traditions, and life as a teenager and shared it with a worldwide audience through Our Global Village (http://inourvillage.whatkidscando.org/global_village_project.html).
- Massachusetts students with developmental disabilities worked at an animal shelter and created photo and video displays to increase animal adoption.
- Portland, ME middle-school students planned and hosted swearing-in ceremonies for new citizens in partnership with the Immigration and Naturalization Service.

Kaye suggests these1
service-learning resources:

- Learn and Serve America: http://www.learnandserve.org
- National Service-Learning Clearinghouse: http://www.servicelearning.org
- Youth Service America: http://www.YSA.org.

"Work That Is Real" by Kathryn Berger Kaye in *Principal Leadership*, February 2010 (Vol. 10, #6, p. 19-23), no e-link available; Kaye is at cbkaye@aol.com.

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8. Making Service Learning Count

"Service learning is a promising practice," says Shelley Billing in this *Principal Leadership* article, "but like other instructional practices, it must be done well to produce positive outcomes." Here are her suggestions:

- Provide quality service while learning important academic objectives.
- Meet a real community need.
- Gather data on the need before and after service.
- Allocate resources and support, which includes a coordinator, professional development, time, and transportation.
- Provide visible and tenacious adult support throughout the program.

"Five Rules Separate High-Quality Service Learning from Community Service" by Shelley Billing in *Principal Leadership*, February 2010 (Vol. 10, #6, p. 26-31), no e-link available; the author is available at billig@rmcdenver.com.

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9. Service Learning Projects in Oregon

In this *Principal Leadership* article, service-learning consultant Kate McPherson lists the essential questions that inspired service-learning projects at Riverdale High School in Portland:

- Interfaith communication on Face book: *How can Christianity and Islam coexist without violence?*
- Resolving peer conflicts: *How can relational aggression be identified and alleviated?*
- Preventing childhood obesity: *What is the biggest contributing factor that citizens have control over to curb the increasing rates of childhood obesity in the United States?*
- Green building strategies and water management: *How could rainwater harvesting and decorous increase efficiency of water use and management in the Portland Metropolitan area?*

"Projects That Launch a Lifetime" by Kate McPherson in *Principal Leadership*, February 2010 (Vol. 10, #6, p. 52-57), no e-link available

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Do you have feedback? Is anything missing?

If you have comments or suggestions, if you saw an article or web item in the last week that you think should have been summarized, or if you would like to suggest additional publications that should be covered by the Marshall Memo, please e-mail: kim.marshall8@verizon.net

About the Marshall Memo

Mission and focus:

This weekly memo is designed to keep principals, teachers, superintendents, and others very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 37 years' experience as a teacher, principal, central office administrator, and writer, lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 44 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are about 50 issues a year).

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Publications covered

Those read this week are underlined.

American Educator
American Journal of Education
American School Board Journal
ASCD, CEC SmartBriefs, Daily EdNews
Catalyst Chicago
Chronicle of Higher Education
Ed. Magazine
Edge
Education Digest
Education Gadfly
Education Next
Education Week
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Educational Researcher
Edutopia
Elementary School Journal
Essential Teacher (TESOL)
Harvard Business Review
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Harvard Educational Review
JESPAR
Journal of Staff Development
Language Learner (NABE)
Middle Ground
Middle School Journal
New York Times
Newsweek
PEN Weekly NewsBlast
Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Reading Today
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