Marshall Memo 384

A Weekly Round-up of Important Ideas and Research in K-12 Education
May 2, 2011

In This Issue:

Quotes of the Week

"The leader's role is to be the chief energy officer. It's to mobilize and focus and direct and inspire and regularly recharge those he or she leads."
Tony Schwartz (see item #4)

"Your head is for having ideas, not holding them… You need lists because your brain isn't good at keeping them."
David Allen (*ibid*.)

"People say, 'I'll do that,' but they don't write it down, and it goes into a black hole."
David Allen (*ibid*.)

"It also feels good to be wanted, and e-mails affirm that people want you."
Tony Schwartz (*ibid*.)

"Shrewdness and stubbornness are often necessary to create something new and good."
Ikujiro Nonaka and Hirotaka Takeuchi (see item #1)

"The purpose of mathematics is to train the students to solve problems in the real world."
Joel Rowlett (see item #7)

"Ideology knows the answer before the question has been asked."
George Packer in "Deepest Cuts" in *The New Yorker*, Apr. 25, 2011
http://www.newyorker.com/talk/comment/2011/04/25/110425taco_talk_packer

1. Leaders' Quest for Knowledge and Practical Wisdom

In this thoughtful *Harvard Business Review* article, Hitotsubashi University/Tokyo professor Ikujiro Nonaka and Harvard professor Hirotaka Takeuchi harken back to Aristotle to define three kinds of knowledge:

- Episteme – universally valid scientific knowledge;
- Techne – skill-based technical knowledge;
- Phronesis – knowing *what should be done* for the common good.

Nonaka and Takeuchi advocate for a communitarian approach to leadership in which all three levels of knowledge are combined with practical wisdom and a strong sense of social purpose. According to them, wise leaders need to be able to:

• *Judge goodness* – Leaders "cannot be content to analyze situations using empirical data and deductive reasoning," say Nonaka and Takeuchi. "They must also make inductive jumps according to their ideals and dreams. If they aren't idealistic, they simply can't create new futures."

• *See the essence* – "Being idealistic isn't enough, though," they continue. "Leaders must also be pragmatic – looking reality in the eye, grasping the essence of a situation, and envisioning how it relates to the larger context…" They must quickly fathom the nature and meaning of people, things, and events and draw general conclusions from random observations. They can do this in three ways: (a) Relentlessly asking what the basis of a problem or situation is; (b) Learning to see the forest and the trees at the same time; "God may live in the details," say Nonaka and Takeuchi, "but leaders should never forget the big picture"; and (c) Constructing and testing hypotheses.

• *Create shared contexts* – Wise leaders constantly orchestrate informal as well as formal opportunities for managers and employees to construct new meaning through their interactions.

• *Communicate the message* – Wise leaders use metaphors, stories, and rhetoric to convert the essence of their experiences into tacit knowledge for individuals and groups.

• *Exercise political power* – Wise leaders bring together people with conflicting goals and spur them into action, sometimes using Machiavellian tactics. "Shrewdness and stubbornness are often necessary to create something new and good," say Nonaka and Takeuchi.

• *Foster practical wisdom in others* – Through apprenticeships and mentoring, wise leaders encourage the development of this kind of thinking in their colleagues, especially

employees on the front lines. The most frequently asked question at Honda is, "What do you think?" A Japanese corporate leader in a different company is fond of saying, "I have only two eyes and one mind." By empowering the company's thousands of workers to make judgments on their own, he says, "we will have quite a few more eyes and minds."

"The Wise Leader" by Ikujiro Nonaka and Kirotaka Takeuchi in *Harvard Business Review*, May 2011 (Vol.89, #5, p. 58-67), no e-link available

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2. What Google Learned About Effective Leadership

In this *New York Times* article, Adam Bryant reports on Project Oxygen, a study within the Google organization to define what makes an effective boss. The project's starting point was an analysis of why people leave their jobs:

- They don't feel a connection to the mission of the organization.
- They don't like or respect their co-workers.
- They have a terrible boss.

The third factor is the most important; bosses have a much greater impact on people's performance and how they feel about a job than anything else.

Based on quarterly performance reviews, feedback surveys, and nominations of top managers within Google, the researchers came up with eight factors that made some bosses highly effective. Surprisingly, technical expertise was last on the list. The essence, says Bryant: "What employees valued most were even-keeled bosses who made time for one-on-one meetings, who helped people puzzle through problems by asking questions, not dictating answers, and who took an interest in employees' lives and careers." Here's the list; see how many of these apply to K-12 schools:

• *Being a good coach* – Providing specific, constructive feedback that balances positive and critical.

• *Empowering your team and not micromanaging* – Balancing giving freedom to employees with being available for advice and challenging the team to tackle big problems.

• *Expressing interest in team members' success and personal well-being* – Getting to know employees as people and making new members of the team feel welcome.

• *Not being a sissy* – Being productive and results-oriented; focusing on what the team wants to accomplish and how they can help achieve it; helping the team prioritize work and removing roadblocks.

• *Being a good communicator and listening to your team* – Holding full-staff meetings and being straightforward about goals, helping the team to connect the dots. Encouraging open dialogue and listening to employees' concerns.

• *Helping employees with career development*.

• *Having a clear vision and strategy for the team* – Even in difficult times, keeping people focused on goals and strategy; involving the team in setting and refining the vision and making progress toward it.

• *Having key technical skills with which to advise the team* – Rolling up your sleeves and working side by side with the team when necessary; understanding the specific challenges of the work.

"The Quest to Build a Better Boss" by Adam Bryant in *The New York Times*, Mar. 13, 2011 (p. B1, B7) http://www.nytimes.com/2011/03/13/business/13hire.html

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3. Using Small Wins to Improve Morale and Performance

"Want to truly engage your workers?" ask Teresa Amabile and Steven Kramer in this *Harvard Business Review* article. "Help them see their own progress." Workers' diaries in a number of jobs show that good days are characterized by three things: progress, "catalysts", and "nourishers", and bad days are marked by the opposite: setbacks, inhibitors, and toxins.

• *Progress* is a sense of moving forward with meaningful work. Big wins on major life goals are relatively rare, say Amabile and Kramer. "The good news is that even small wins can boost inner work life tremendously and can evoke outsize reactions." The mirror image – small losses or setbacks – can have a surprisingly negative effect. "Consequently," say Amabile and Kramer, "it is especially important for managers to minimize daily hassles." They suggest that managers jot down on a daily basis one or two events that constituted a small win or a possible breakthrough.

• *Catalysts* are actions that support work, including clear goals, sufficient resources and time, help with the work, openly learning from problems and successes, and a free exchange of ideas. When people realize that they have these key ingredients, say Amabile and Kramer, "they get an instant boost to their emotions, their motivation to do a great job, and their perceptions of the work and the organization." Inhibitors have the opposite effect. Managers might ask themselves every day if employees have clear short- and long-term goals, sufficient autonomy to solve problems, the resources, time, ideas, and support they need, and a process for gleaning lessons from the day's successes and problems.

• *Nourishers* are acts of interpersonal support, including respect and recognition, encouragement, emotional comfort, and opportunities for affiliation. Toxins, on the other hand, poison people's motivation to do a good job. Amabile and Kramer suggest that mangers ask themselves each day if they showed respect to team members by recognizing their contributions, attending to their ideas, and treating them as trusted professionals, encouraged them as they faced difficult challenges, supported them if they had a personal or professional problem, and created a sense of professional affiliation and camaraderie.

From their research, Amabile and Kramer were able to identify the four primary ways in which some managers unwittingly drain their colleagues' work of meaning:

- Dismissing, downgrading, or ignoring the importance of a person's work or ideas;
- Destroying an employee's sense of ownership in the work by frequent and abrupt reassignments;
- Burying a person's work or signaling that it will never see the light of day;
- Not informing employees of an important shift in organizational priorities.

Amabile and Kramer believe there's a self-reinforcing loop between inner work life and organizational progress. "By supporting people and their daily progress in meaningful work," they say, "managers improve not only the inner work lives of their employees but also the organization's long-term performance, which enhances inner work life even more… To become an effective manager, you must learn to set this positive feedback loop in motion… You won't have to figure out how to x-ray the inner work lives of subordinates; if you facilitate their steady progress in meaningful work, make that progress salient to them, and treat them well, they will experience the emotions, motivations and perceptions necessary for great performance. Their superior work will contribute to organizational success. And here's the beauty of it: they will love their jobs."

"The Power of Small Wins" by Teresa Amabile and Steven Kramer in *Harvard Business Review*, May 2011 (Vol.89, #5, p. 70-80), no e-link available; the authors can be reached at tamabile@hbs.edu and stevek1006@workevents.net.

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4. Suggestions for Managing Time and Priorities

In this *Harvard Business Review* interview, time management gurus David Allen and Tony Schwartz share their insights on becoming more productive. Some highlights:

Schwartz defines four primary dimensions of energy: physical (fitness, sleep, nutrition, and rest), emotional (cultivating positive emotions and communicating them to others); mental (being able to focus on one thing at a time and learning to shift to more-creative work); and spiritual (defining purpose because, he says, "when something really matters, you bring far more energy to it"). "The leader's role is to be the chief energy officer," he says. "It's to mobilize and focus and direct and inspire and regularly recharge those he or she leads."

"Organizations need to recognize that human beings are basically organisms containing energy," he continues. "And that energy is either being renewed or being dissipated over time. An organization has to realize that part of its responsibility, whether it wants it or not, is to ensure that people have full tanks of energy."

Humans are designed to cycle between intense activity and rest (including naps), says Schwartz. "We're at our best when we're moving rhythmically between spending energy and renewing it." He suggests bursts of 90 minutes of intense work and then taking a break to recover.

"Your head is for having ideas, not holding them," says Allen. "You need lists because your brain isn't good at keeping them. Your mind is this dumb little computer that will wake you up at 3:00 a.m. and beat you bloody over stuff you can't do spit about while you're lying there… Just dumping everything out of your head and externalizing it is a huge step." The trick with major projects and tasks is to break them down into smaller "next actions" that are much more manageable.

Allen says many managers "don't capture stuff that has their attention… It keeps rolling around in the organizational psyche as well as the personal psyche, draining energy and creating incredible psychic residue. People say, 'I'll do that,' but they don't write it down, and

it goes into a black hole. That would be fine if it was just one thing, but it's hundreds of things."

Allen says that multitasking and getting distracted by "the latest and loudest" is another huge problem. Schwartz and Allen agree that interrupting serious work to answer every e-mail beep undermines concentration and the quality of work. To combat this, managers need to do e-mails in efficient bursts at strategic points in the day when they can concentrate fully on the task, and also build in a regular weekly review system they trust.

Schwartz says reacting to the flood of e-mail and other incoming information is addictive, and most managers need something akin to a 12-step program to deal with it, complete with an admission that we're powerless in the face of such seductive forces. "The problem is that our willpower and self-discipline are wildly overrated," he says. It's a huge mistake to check e-mail first thing in the morning, he asserts, because doing so surrenders your agenda to others. People feel effective doing e-mail. "It also feels good to be wanted," he says, "and e-mails affirm that people want you." Better to do the most important item on your to-do list *first*, then look at e-mail.

"Becoming More Productive" – An Interview with David Allen and Tony Schwartz in *Harvard Business Review*, May 2010 (Vol.89, #5, p. 82-87), no e-link available

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5. When Studying Is Difficult, Learning Increases

In this *Education Week* article, Sarah Sparks reports on intriguing new research on study skills led by Nate Kornell of Williams College. It turns out that when studying material feels easy to students, they remember it less well. But if they need to work harder to remember material, they are able to retrieve it more effectively. In one study, students were asked to memorize 35 Swahili vocabulary words for a test.

• One group of students organized the words into five stacks, studying each group in turn. These students felt confident about their studying and predicted they would remember 60 percent of the words – but they got only 17 percent correct on the test.

• The other group of students studied all the words together and were less confident that they would do well, predicting they would get 46 percent correct. In fact, they got 43 percent right.

Researchers say the first group of students' overconfidence comes from "stability bias" – people's tendency to think they will remember better when the initial task feels easy. In fact, people remember better and longer when there are "desirable difficulties" in the study process – when they self-test themselves on big chunks of material and space out study sessions over days and weeks before an exam.

The challenge for schools trying to teach effective study skills is that stability bias leads students to choose easier and less ineffective study strategies – studying short chunks of material or cramming in one long session the day before an exam. As students move from elementary school to secondary school to college, they need to learn increasing amounts of

material through homework and independent study, and if they're using ineffective strategies, they'll do worse and worse.

"For teachers trying to design an assignment," says Kornell, "the ideal thing is to put your students in a situation where they are challenged. You want them to eventually feel something is easy to process, but only because they've worked through it." The more students have had to flex their mental muscles, the stronger their memory and learning will be. Teachers need to communicate to students the counterintuitive fact that even through they're struggling and making mistakes and not feeling successful at first, the more difficult strategy works much better than other strategies that feel easier and more satisfying.

"Studies Find 'Desirable Difficulties' Help Students Learn" by Sarah Sparks in *Education Week*, Apr. 27, 2011 (Vol. 30, #28, p. 6), http://www.edweek.org

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6. Real Men Don't Ask for Help?

In this *Education Week* article, Sarah Sparks reports on a study conducted by the University of British Columbia and Carnegie Mellon University on why students don't more readily ask for help when they aren't successful. Observing conventional classrooms, it's difficult to answer this question, but computer-driven instructional programs collect data on what students do and make it possible to get some answers. The researchers looked at data from online programs that gave students the option of pushing a Help button when they got a problem wrong; the computer was programmed to give them progressively more helpful hints and eventually give the answer.

The researchers found that only 25 percent of students pushed the Help button when they got a problem wrong. Even after repeatedly getting problems wrong, no more than 30 percent of students took advantage of the Help button. Most students kept trying to solve the problem, got frustrated, and then pushed Help – but rather than reading the hints, 82% of them quickly scrolled through and copied the correct answer. Asked why they didn't use the hints to understand and learn better, students said their parents had told them, "Real men don't ask for help."

Based on this feedback, the researchers tweaked an adaptive instructional program in two ways:

- When students got a problem wrong several times in a row in quick succession (indicating that they were guessing), a help window popped up noting that the students seemed to be struggling and might want to take advantage of the glossary and hint features;
- When students were moving quickly through the hints without taking enough time to read them (indicating that they were going to cheat), a help window popped up encouraging them to slow down and think about the hint.

Students who used this modified software were more likely to use the helpful resources than those who used conventional software. But a significant number of students continued to guess and cheat. Their parents' message about asking for help still persisted in their minds.

"Digital Tutor Nudges Students to Slow Down and Seek Help" by Sarah Sparks in *Education Week*, Apr. 20, 2011 (Vol. 30, #28, p. 11) http://www.edweek.org

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7. Promoting Risk-Taking and Meaning in High-School Math Classes

"The purpose of mathematics is to train the students to solve problems in the real world," says Tennessee educator Joel Rowlett in this thoughtful *Principal Leadership* article. To reach that goal, he believes that students need to wrestle with real-world problems, take risks, and experience some failures before finally mastering the material.

Interim failures are inevitable and essential, says Rowlett, but teachers need to handle them carefully: "Most people can recall a moment when someone's critical eye and scathing comments quenched any thirst for creativity." Students need constructive advice and words of encouragement so they aren't afraid to give incorrect answers.

They also need real-world problems with non-obvious solutions, and most textbook problems don't fit this description – they're generally routine, cut-and-dried problems where students plug in formulas to find the single right answer. To really develop students' mathematical ability, Rowlett believes some problems must be non-algorithmic and beyond students' grasps, requiring them to synthesize knowledge in a new situation – for example, looking at a map of the southern United States and estimating the number of square miles in the state of Texas. After posing a problem like this, the worst thing the teacher can do is tell students, "Divide the map into squares of equal area and estimate its total area" – that would rob the exercise of mystery, struggle, discovery, and real learning.

When Rowlett first taught geometry and calculus in the early 1990s, discovery and problem solving were not features of his classroom. "I made it absolutely clear that the answer to every problem was either right or wrong," he says, "and I did not give partial credit." This made his job a lot easier – he could grade 100 tests in less than an hour – and his students did well on standardized tests. But looking back, he's afraid his kids had the same reaction to math that he had as a student – "Boring, boring, boring" – and didn't know how to solve real-world problems and how math fitted into their lives.

Rowlett finally realized that students won't explore and appreciate mathematics if they believe their efforts might lead to failing grades. Now as an assistant principal, he urges teachers to challenge students, accept mistakes when they struggle to apply knowledge to new situations, give partial credit, applaud creativity, risk-taking, and collaboration, and use mistakes to guide students toward better solutions. "Principals who want to prepare students for future success must send the message to their staff members that traditional teaching and assessment strategies are no longer acceptable," he says. "Every teacher's overall grading system must include some assessment of the students' abilities to apply the learning to real-world settings" – including assessments that include critical thinking skills and open-ended discovery applications.

"Constructive Failure in Mathematics Classes" by Joel Rowlett in *Principal Leadership*, April 2011 (Vol. 11, #8, p. 36-39), no e-link available; Rowlett is at rowlettj@rcs.k12.tn.us.

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8. A Tennessee Saturday Detention Morphs Into Something Different

In this *Principal Leadership* article, Tennessee principal Allen Pratt describes how his high school decided to institute Saturday School to deal with tardiness and discipline problems. Students would be required to show up at school from 8:00 a.m. to noon on Saturday if they:

- Had three unexcused tardies to school or to any class;
- Behaved inappropriately (as determined by administrators);
- Repeatedly violated Category I rules (minor disruptions, failure to do classwork, etc.)

Pratt describes the mandate given the teacher in charge: "He was to make the four hours that students spent at Saturday School pure agony and despair." Students were required to provide their own transportation, arrive on time, and bring their own supplies and snacks, and would be barred from using computers or visiting their lockers. If students didn't show up for Saturday School or committed additional offenses, their detention time doubled, and if they missed a second session, they would be suspended for five days.

Two weeks after Saturday School began, a first-year math teacher asked if he could use the time to tutor Algebra I students who were having difficulty. Pratt approved the request and agreed to compensation, and the teacher launched the Captain Crunch Fun Bunch, staffed by high-achieving student volunteers (they got extra credit). When Pratt checked in several weeks later, there were 45 students in the school on Saturday morning, not one of them for disciplinary reasons.

"The idea that Saturday School was a place to get help spread by word of mouth throughout the town," he says, "and parents began dropping off their children at a rapid rate." One student with a reputation for having a negative attitude begged to be assigned to Saturday School. When Pratt said no, the student walked out of his office and misbehaved in his next class, "earning" what he wanted. "That was when I realized that Saturday School was a winner but that we needed to tweak it to make it golden," says Pratt.

By the second year, Saturday School was staffed by a lead teacher and math specialists for tutoring, credit recovery classes run by the guidance counselor, service learning work, and other services. Pratt says it became a major feature in the school's turnaround.

"Saturday School" by Allen Pratt in *Principal Leadership*, April 2011 (Vol. 11, #8, p. 40-42), no e-link available; Pratt can be reached at apratt@mctns.net.

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9. Short Items:

a. How stuff works – The Discovery Channel has launched this website on how things work, including 10 scientific laws and theories, things you missed in history class, and the top five science-borne superpowers: http://www.howthingswork.com. Student can also ask questions and try their hand at games and puzzles.

"News to Use" in *Middle Ground*, April 2011 (Vol. 14, #4, p. 6)
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b. Vocabulary building – The Merriam-Webster site has a Word of the Day, word games, new words and slang, and top ten lists of confused words, 1990s words, and words inspired by film makers: http://www.merriam-webster.com.

"News to Use" in *Middle Ground*, April 2011 (Vol. 14, #4, p. 6)
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c. Virtual science and math experiences – This website from Education Development Center has interactive learning experiences in science and math – videos, simulations, games, and virtual activities – for young adolescents: http://smartr.edc.org.

"News to Use" in *Middle Ground*, April 2011 (Vol. 14, #4, p. 7)
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d. Civil War Trust – This website from a battlefield preservation organization has a menu of online resources, including a two-week curriculum for various grade levels, links to primary sources, and interviews with great teachers: http://www.civilwar.org/education

"Teaching Resources" in *Education Week*, Apr. 20, 2011 (Vol. 30, #28)
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e. Civil War Edsitement – This National Endowment for the Humanities has free K-12 resources, including 33 lessons, built around primary sources on the causes, the course, and the consequences of the war: http://edsitement.neh.gov/american-civil-war

"Teaching Resources" in *Education Week*, Apr. 20, 2011 (Vol. 30, #28)
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f. Civil War documents – This National Archives website has reproducible copies of primary documents (including photographs and stories of African-American soldiers) and teaching activities and cross-curricular activities: http://www.archives.gov/education/lessons

"Teaching Resources" in *Education Week*, Apr. 20, 2011 (Vol. 30, #28)
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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 41 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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- A free sample issue

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- How to change access e-mail or log-in

Publications covered

Those read this week are underlined.

American Educator
American Journal of Education
American School Board Journal
ASCD, CEC SmartBriefs, Daily EdNews
Ed. Magazine
EDge
Education Digest
Education Gadfly
Education Next
Education Week
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
Essential Teacher (TESOL)
Harvard Business Review
Harvard Education Letter
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
Rethinking Schools
Review of Educational Research
Teachers College Record
The Atlantic Monthly
The Chronicle of Higher Education
The Language Educator
The Learning Principal
The New Yorker
The Reading Teacher
The School Administrator
Theory Into Practice
Tools for Schools