Marshall Memo 193

A Weekly Round-up of Important Ideas and Research in K-12 Education
July 9, 2007

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Quotes of the Week

"When people become a boss for the first time, they usually screw it up badly."
Harvard Business Review editor Thomas Stewart (see item #3)

"What is the cognitive dissonance between my vision and my Outlook?"
Thomas Stewart (*ibid.*)

"How do I react to stress? Do I bully? Do I quail? Do I go out and have a drink?"
Thomas Stewart (*ibid.*)

"The good leader, realizing that there is a natural human tendency to avoid bad news, traps himself into having to face it."
Charles Peters (see item #2)

"Many students seem to have difficulty integrating the mechanics of writing – sentence structure, grammar, spelling, word choice, and paragraphing – with the need to gather content, develop a position or argument, identify an audience, and organize thoughts."
William Powell and Ochan Kusama-Powell (see item #4)

"I believe that just as you can take a 17-year-old and put him through basic training, inuring him to violence, we can take a person who is insensitive and make him sensitive to others' pain."
Neuroscientist Michael Merzenich (see item #1)

"[I]f you tell people their brain can change, it galvanizes them. You see a rapid improvement in things like motivation and grades, or in resilience in the face of setbacks."
Carol Dweck (*ibid.*)

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1. Important News About the Brain's Plasticity

Just a few years ago, reports Sharon Begley in this *Newsweek* article, the accepted wisdom among neuroscientists was that by the age of three, human brains were pretty much hard-wired in terms of basic personality traits. Sure, new memories could be added, new skills learned, and wisdom gained, writes Begley, but "the basic cartography of the adult brain was thought to be as immutable as the color of your eyes." This deterministic view "spread through our culture," says psychiatrist Norman Doidge, "stunting our overall view of human nature. Since the brain could not change, human nature, which emerged from it, seemed necessarily fixed and unalterable as well."

But in the last few years, scientists have found that brain wiring *can* change, even among adults. It turns out that people's sense of emotional security can change the degree to which they are altruistic or selfish, tolerant or xenophobic, open or defensive. In one study by psychologists Phillip Shaver and Mario Mikulincer, adult volunteers were given cues designed to activate feelings of unconditional love and protection – from a parent, a lover, or God. Remarkably, the subjects became more willing to give blood and do volunteer work and were less hostile to other ethnic groups. Offered a chance to inflict pain on a hated person (serving the person painfully spicy hot sauce), subjects held back. And when they saw a young woman who was visibly upset over being asked to pick up a tarantula, people whose brains had been security-activated volunteered to take her place.

"These discoveries change everything about how we should think of ourselves, who we are and how we get to be that way," says neuroscientist Michael Merzenich. "We now know that the qualities that define us at one moment in time come from experiences that shape the physical and functional brain, and that continue to shape it as long as we live." The brain remains a work in progress throughout life, adding neurons and functions in response to external stimuli. When a girl practices the violin, for example, her brain develops new circuitry.

It's even possible for an area of the brain originally programmed for one purpose to change its function. When children lose their sight at a young age, their visual cortex changes to process touch or sound or language. "If something as fundamental as the visual cortex can shrug off its genetic destiny," writes Begley, "it should come as little surprise that other brain circuits can, too. A circuit whose hyperactivity causes obsessive-compulsive disorder can be quieted by psychotherapy. Patterns of activity that underlie depression can be shifted when patients learn to think about their sad thoughts differently. Circuits too sluggish to perceive

some speech sounds (staccato ones such as the sound of ‘d’ or ‘p) can be trained to do so, helping kids overcome dyslexia. For these and other brain changes, change is always easier in youth, but the window of opportunity never slams shut.”

Michael Merzenich believes we have only begun to understand how much the brain can be changed. “The qualities that define a person have a neurological residence and are malleable,” he says. “We know that in a psychopath, there is no activation in brain areas associated with empathy when he sees someone suffering. Can we change that? I don’t know exactly how, but I believe we can. I believe that just as you can take a 17-year-old and put him through basic training, inuring him to violence, we can take a person who is insensitive and make him sensitive to others’ pain. These things that define us, I’m convinced, can be altered.”

What about genes for shyness and other personality traits? There are early signs that these inherited dispositions may also be malleable. Children who are born with the form of a gene called 5-HTT associated with shyness are usually quiet and introverted. But scientists at the University of Maryland have found that by the age of seven, many are not. It appears that childhood experiences have a direct influence on whether this gene plays out its destiny or is overridden. “The molecular mechanism by which experiences reach down into the double helix and inhibit or elicit the expression of a gene is not as clear in people as in lab rats,” writes Begley. “At least, not yet. But it’s an early sign that we are not necessarily slaves to the genes we inherit.”

Unfortunately, may Americans haven’t heard the news about how malleable their brains are. “It’s puzzling that determinism is so attractive to so many people,” says Merzenich. “Maybe it’s appealing to view yourself as a defined entity and your fate as determined. Maybe it’s in our nature to accept our condition.”

But there’s a problem here. Children and adults who believe that their abilities and traits are fixed are much less likely to be affected by interventions intended to improve academic performance or resilience or openness to new experiences. Stanford researcher Carol Dweck, whose recent book, *Mindsets*, explores this area, says the opposite is true for children and adults who believe that their brains can change. “[I]f you tell people their brain can change, it galvanizes them,” she says. “You see a rapid improvement in things like motivation and grades, or in resilience in the face of setbacks.” This is much less likely to happen among people who believe their brains are hard-wired from early childhood.

“When Does Your Brain Stop Making New Neurons?” by Sharon Begley in *Newsweek*, July 2/9, 2007 (p. 62-65)

2. Leaders Who Make Sure They Hear the Bad News (an oldie but goodie)

In this 1986 classic from *The Washington Monthly*, journalist Charles Peters describes several case studies in which strong, take-charge, gung-ho, get-it-done leaders tended to avoid hearing bad news from their subordinates. Only a few of them had the wisdom to counteract that tendency. See if you think this syndrome might be present in schools under pressure to get high achievement from all students.

• *The Challenger space shuttle disaster* – In the mid-1980s, NASA leaders were pushing to dramatically increase the number of shuttle launches. In late January 1986, the shuttle Challenger was on the launching pad but had suffered seven delays because of bad weather and mechanical problems. On the morning of January 28th, the pressure to launch was intense, not only because of NASA's embarrassment with all the delays, but also because the president's State of the Union address was scheduled for that evening and part of his prepared speech said that Christa McAuliffe, a teacher from New Hampshire, was soaring through space at that very moment. When engineers at Morton Thiokol, the shuttle contractor, raised concerns that the O-rings could fail because of low temperatures at Cape Canaveral that morning, NASA honcho Lawrence Mulloy exploded: "My God, Thiokol, when do you want me to launch? Next April?"

Peters writes, "Mulloy may be one of the villains of this story, but it is important to realize that you need Lawrence Mulloys to get things done. It is also important to realize that, if you have a Lawrence Mulloy, you must protect yourself against what he might fail to do or what he might do wrong in his enthusiastic rush to get the job done. And you can't just ask him if he has any doubts. If he's a gung-ho type, he's going to suppress the negatives."

• *The Iranian hostage rescue debacle* – In 1980, President Jimmy Carter asked the U.S. military to free the hostages held by militants in Teheran. As preparations neared completion, the president asked General David Jones to check out the rescue plan, which everyone knew was extremely risky. Jones asked Colonel Charlie Beckwith, the on-site commander, what he really thought of the mission. "Be straight with me," Jones ordered. "Sir, we're going to do it!" Beckwith replied. "We want to do it, and we're ready." After the tragic events at Desert One, investigators learned that the Delta commandos who were preparing to carry out the rescue thought the Marine pilots assigned to fly the helicopters were incompetent – and it was a pilot's error that caused the tragedy.

• *The Bay of Pigs fiasco* – In 1961, President John F. Kennedy received similarly confident assurances from the military that the American-supported invasion of Cuba by anti-Castro dissidents was on track. The bloody and humiliating defeat of the Cuban Brigade at the Bay of Pigs taught Kennedy a lesson that he was able to apply the very next year in the Cuban Missile Crisis. Kennedy made sure there was always someone in the room who questioned official reports and was willing to suggest another approach – in this case, Adlai Stevenson. His advice, and Kennedy's own skepticism of what he was being told by the chain of command, prevented a nuclear war.

• *FDR and the New Deal* – President Franklin D. Roosevelt found it difficult to travel extensively, but he skillfully used Harry Hopkins, Lorena Hickock, and his wife Eleanor to give him the straight facts on New Deal programs around the country.

• *Sargent Shriver and the Peace Corps* – When the Peace Corps was first launched in 1961 as one of the signature initiatives of the fledgling Kennedy administration, director Shriver pushed to get volunteers into developing countries *fast*. His subordinates cut corners and didn't tell Shriver about inadequate training, poorly qualified volunteers, and stupid placement decisions (in some cases, volunteers were sent to countries that had no jobs for

them). People shielded their boss from these facts because they knew he wanted action, not excuses, and believed it was their job to solve the problems, not burden him with all the fine detail. As a result, Shriver had every reason to believe that the Peace Corps was getting off to a fabulous start.

But Shriver suspected otherwise. Although he liked good press and accolades as much as any ego-driven leader, "he also had an instinct," says Peters, "that the ultimate bad press would come if the world found out about your disaster before you had a chance to do something to prevent it." That's why he decided in July of 1961 to appoint Peters to help him get the bad news first. Peters quickly uncovered the truth about flawed operations and reported directly to Shriver. "Repeatedly I would find that a problem that was well-known by people at lower and middle levels of the organization, whose responsibility it was, would be unknown at the top of the chain of command or by anyone outside." The most important lesson Peters learned from this experience? You have to get into the trenches: "I had to go to Ouagadougou and talk to the volunteers at their sites before I could really know what the Peace Corps was doing and what its problems were."

The reports that Peters and his small staff sent from the field disturbed and annoyed Shriver, and at one point there was a rumor that Peters was going to be fired. But then Shriver made a trip to Africa and cabled from Somalia that Peters's reports were more accurate than the information coming through official channels. "I knew then that, however much Shriver wanted to hear the good news and get good publicity," writes Peter, "he could take the bad news. The fact that he could take the bad news meant that the Peace Corps began to face its problems and do something about them before they became a scandal."

The literature on leadership says that good leaders must set goals and create a sense of urgency about meeting them. "But what many of them never learn," says Peters, "is that once you set those goals you have to guard against the tendency of those down below to spare you not only 'all the fine detail' but essential facts about significant problems. This is what distinguishes the bad leaders from the good. The good leader, realizing that there is a natural human tendency to avoid bad news, traps himself into having to face it. He encourages whistleblowers instead of firing them. He visits the field himself and talks to the privates and lieutenants as well as the generals to find out the real problems… [H]e must have some independent knowledge of what's gong on down below in order to have a feel for whether the chain of command is giving him the straight dope."

"From Ouagadougou to Cape Canaveral: Why the Bad News Doesn't Travel Up" by Charles Peters in *The Washington Monthly*, April 1986 (p. 27-31), no e-link available

3. The Ultimate Test for a Leader: Failure

"When people become a boss for the first time," said *Harvard Business Review* editor Thomas Stewart in a recent speech, "they usually screw it up badly. Too often people think being the boss means doing what I used to do, except on a larger scale, and now I've got people I can order around."

"Both parts of that definition are wrong," Stewart continues. "Leaders often fail to recognize they are no longer workers. You may be working hard, harder than ever, but now you work *through* other people. When you're under stress, it's easy to fall back on your comfort zone. This happens to a lot of bosses; the first time things get difficult, they want to roll up their sleeves and go back to the talents that got them in that leadership position in the first place. But as you move up, the most important decisions become the decisions of who you are going to hire or promote, and how you're going to develop them. That may require a set of skills very different from the ones you're used to using. You have to be patient, deciding when, for example, to refrain from doing something you're good at, because John or Jane need to learn to do it themselves."

The biggest test for leaders, says Stewart, is how they deal with failure. "If you're any good, you're going to make mistakes," he says, "and not just once. Each time you goof, it will be on a slightly larger scale, with slightly larger consequences." He outlines three layers of the challenge:

• First, how you handle the actual crisis – in particular, how you minimize the damage your misjudgments inflict on the people around you. "When the crisis comes," he says, "you're either going to gain immeasurable amounts of organization capital, or you're going to lose it and never get it back."

• Second, what you learn from your mistake – Stewart gives the example of John F. Kennedy's Bay of Pigs fiasco, and how he rebounded in the Cuban Missile Crisis with lessons he learned [see previous article].

• Third, whether you make a comeback – Can you say, "I screwed up, but I'm not done yet." Do you rediscover your heroic mission and prove your mettle to yourself and the world? Can you run the leadership marathon rather than just a leadership sprint?

Stewart then poses another test to leaders: *Can you tell yourself the truth?* The higher up you get in an organization, the harder it is to hear the truth and the more important it is to be able to tell it to yourself. He suggests a number of questions that leaders should ask themselves in the mirror:

- What are my visions and priorities? Do I *have* a vision? Do I communicate it? How do I manage my time? What is the cognitive dissonance between my vision and my Outlook?
- Do I give feedback well, or is it messy? Do I have several people around me who will tell me the truth or do I live in a bubble?
- Have I identified my successors? If so, have I done anything about it? Am I building them up? Does anyone else know my plan?
- If I were starting from scratch, would I organize things the way they are organized now? What would the clean sheet of paper look like?
- How do I react to stress? Do I bully? Do I quail? Do I go out and have a drink?
- Do I feel like I have to zip my lip and be politically correct all the time? Am I the person I want to be?

"That's the ultimate test of the leader," concludes Stewart, "whether or not a leader can look at him or herself and see authenticity there. Because that's what's communicated to others and that's what makes organizations work."

"The Tests of a Leader: Initiation, Failure, and Reinvention" by Thomas Stewart, from a speech given at the 11th Annual Wharton Leadership Conference, June 7, 2007, condensed and edited in the *Wharton Leadership Digest*, July 2007 (Vol. 11, #10, p. 1-9)
http://leadership.wharton.upenn.edu/digest/index.shtml

4. Using Cognitive Coaching to Help Students Improve Their Writing

(Originally titled "Coaching Students to New Heights in Writing")

In this *Educational Leadership* article, Malaysia-based educators William Powell and Ochan Kusama-Powell describe how they have used cognitive coaching to help international high-school students improve their writing. Fourteen students with whom the authors piloted this approach made significant gains in their writing achievement on international examinations (all but one gained two stanines) and also made gains in their verbal and nonverbal communication skills.

"Many students seem to have difficulty integrating the mechanics of writing – sentence structure, grammar, spelling, word choice, and paragraphing – with the need to gather content, develop a position or argument, identify an audience, and organize thoughts," say the authors. "Our hunch was that coaching at the prewriting stage would provide students with a structure for cognitive and organizational planning in a psychologically safe environment."

Coaching at this stage is particularly helpful, they argue, because writing is a much more solitary act than speaking – it's like having a conversation with a blank piece of paper (Vygotsky, 1986). "Because no audience is present in the act of writing, immediate feedback is unavailable," say Powell and Kusama-Powell. "No one is there to give assistance or redirection when a thought has gone astray… Coaching can give students an immediate audience and instant feedback, helping them see where they need to more fully explain their ideas."

The idea is for the cognitive coach to support students' thinking as they plan a piece of writing – not praising, criticizing, giving advice, or offering solutions. Powell and Kusama-Powell suggest these three nondirective coaching techniques, all of which they used with students and taught students how to use on their own:

• *Pausing* – By using wait-time in their conversations with students, coaches send three crucial messages: (a) Neither of us needs to have all the right answers; (b) both of us can take our time as we think this through; and (c) we need to get below the surface.

• *Paraphrasing* – When coaches restate students' thoughts, they clarify and acknowledge what's been said, organize and summarize it, and make students' statements more concrete. Students found paraphrasing difficult but worthwhile. One said, "I think paraphrasing works like a bridge between two people's thoughts when they are communicating and probably… helps the bridge to become wider and thicker."

• *Probing* – Coaches help students recall information, clarify a point, predict, or evaluate.

Powell and Kusama-Powell suggest the following steps to help students do their own thinking as they plan their writing – eventually getting to the point where they can self-coach:

- Clarify goals – Focusing on the writing prompt or topic, defining their intended audience, and thinking through how the audience may react.
- Identify what success looks like – Defining what a good piece of writing should contain and thinking about areas in which their writing needs to improve.
- Anticipate approaches – Getting students to articulate the content, themes, premises, connections, and arguments they will use in their essay.
- Prioritize and organize – Helping students think through the structure and sequence of the essay.
- Reflecting on the coaching – Prodding students to think metacognitively about what they have just been through, hopefully coming up with statements like this: "My ideas were blurry before, but now they're more concrete. I have a plan to write a more specific, organized essay."

"Coaching Students to New Heights in Writing" by William Powell and Ochan Kusama-Powell in *Educational Leadership*, Summer 2007 (Vol. 64, #10), available at http://www.ascd.org, click on Publications and navigate to this issue and article.

5. Short Items:

a. Virtual field trips – (Originally titled "Making the Most of Field Trips") In this *Educational Leadership* article, California teacher Linda Mayger provides links to a number of virtual field trips:

• Yellowstone National Park – http://www.windowsintowonderland.org - grades 5-8, with 17 video tours covering geothermal, wildlife, and historical features of the park, as well as an "ask-the-expert" section.

• The Titanic – http://www.discovery.com/guides/history/titanic/Titanic/titanic.html - allows students to follow the path of five actual passengers, hear their story, and find out if they survived the tragedy.

• Khufu's Pyramid – http://www.pbs.org/wgbh/nova/pyramid/explore/khufuenter.html - allows students to explore this pyramid right down to its burial chamber.

• National Gallery of Art – http://www.nga.gov/kids/kids.htm - with an interactive kids' zone where students can view and sometimes modify famous works of art.

• Outer space – http://www.nasa.gov/multimedia/mmgallery/index.html - with an interactive tour of Titan and a continuously updated view of Saturn's moon.

"Making the Most of Field Trips" by Linda Mayger in *Educational Leadership*, Summer 2007 (Vol. 64, #10), available at http://www.ascd.org, click on Publications and navigate to this issue and article

b. Virtual monument tours – (Originally titled "A Monumental Curriculum") In this *Educational Leadership* article, education professors Bruce Uhrmacher and Barri Tinkler

describe field trips they have designed with teachers to explore historical monuments, including the Martin Luther King Jr. Memorial in Atlanta, the Christopher Columbus and Colorado Civil War memorials in Denver, and the Robert Gould Shaw Memorial in Boston. Their curriculum calls for looking at three aspects of each memorial: (a) Whose story does it tell? (b) How does it tell the story in terms of its design and artistry? and (c) How does it affect us? A sidebar in the article gives selected websites for studying monuments:

• African-American monuments, museums, and memorials, including photographs: http://www.geocities.com/Athens/Troy/1228

• American Battle Monuments Commission, with information on the new World War II memorial: http://www.abmc.gov

• Holocaust Camp Memorials, which is part of a teacher's guide to the Holocaust: http://www.fcit.usf.edu/holocaust/resource/gallery/gallery5.htm

• Inventories of American painting and sculpture, with American artworks from the Smithsonian American Art Museum: http://americanart.si.edu/art_info/inventories-intro.cfm

• Martin Luther King Jr. National Memorial, including a virtual tour of the design: http://mlkmemorial.org

• Monumental Math Project, with a curriculum with geometric concepts in relation to monuments: http://www.uteach.utexas.edu/~gdickinson/pbi/PBISpring04/Monument/Content/lesson.htm

• Monuments and Memorials to Women Warriors, with photographs and information on monuments to women: http://userpages.aug.com/captbarb/monuments.html

• National Park Service, with information about memorials and monuments administered by the Park Service: http://www.nps.gov

• Oklahoma City National Memorial with a design gallery and symbolic concepts: http://oklahomacitynationalmemorial.org

• Preserving Memory: A Study of Monuments and Memorials, including a unit developed by the Yale-New Haven Teacher's Institute: http://www.yale.edu/ynhti/curriculum/units/1993/1/93.01.06.x.html

• Saint-Gaudens' Memorial to Shaw and the 54th, including a photo gallery of the memorial: http://nga.gov/feature/shaw/

• The Statue of Liberty: The Meaning and Use of a National Symbol, with an interdisciplinary unit developed by EDSITEment: http://edsitement.neh.gov/view_lesson_plan.asp?ID=313

• World Trade Center Site Memorial Competition, with the designs submitted for consideration: http://www.wtcsitememorial.org

• World Trade Center Memorial Foundation, with a virtual tour of the site for and the proposed design for the memorial and museum at Ground Zero: http://www.buildthememorial.org

"A Monumental Curriculum" by Bruce Uhrmacher and Barri Tinkler in *Educational Leadership*, Summer 2007 (Vol. 64, #10), available at http://www.ascd.org, click on Publications and navigate to this issue and article

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).

Subscriptions:

Individual subscriptions are $50 for the school year. Rates decline steeply for multiple readers within the same organization. See the website for these rates and information on paying by check or credit card.

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- A database of all articles to date, searchable by topic, title, author, source, level, etc.
- How to change access e-mail or password

Publications covered

Those read this week are underlined.

American Educator
American School Board Journal
ASCD, CEC SmartBriefs
Atlantic Monthly
Catalyst Chicago
Chronicle of Higher Education
CommonWealth Magazine
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
NASSP Bulletin
New York Times
New Yorker
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
TESOL Quarterly
Theory Into Practice
Tools for Schools