Marshall Memo 671

A Weekly Round-up of Important Ideas and Research in K-12 Education
January 30, 2017

In This Issue:

Quotes of the Week

"We have the chance to transform the course of our lives. Doing so will mean discovering the heroism of the incremental."

Atul Gawande (see item #1)

"If students left the classroom before teachers have made adjustments to their teaching on the basis of what they have learned about students achievement, then they are already playing catch-up. If teachers do not make adjustments before students come back the next day, it is probably too late."

Dylan Wiliam, 2007

"As servant leaders, teacher leaders understand that their belief in others' capabilities and conveying that belief in words and actions will result in ordinary people accomplishing extraordinary things."

Joellen Killion, Cindy Harrison, Amy Colton, Chris Bryan, Ann Delehant, and Debbie Cooke (see item #2)

"The brain's active processing capacity is finite, so unless knowledge is encoded in long-term memory, having to search for it actually crowds out other forms of cognition. Knowing things helps you think and read successfully."

Doug Lemov (see item #3)

"Talking about music is like dancing about architecture."

Steve Martin (quoted in item #5)

"Let us dedicate ourselves to what the Greeks wrote so many years ago: to tame the savageness of man and make gentle the life of this world."

Robert F. Kennedy, 1968 address immediately after Martin Luther King's assassination

1. How Is Primary Care in Medicine Like Classroom Teaching?

In this *New Yorker* article, physician/writer Atul Gawande says he decided to go into surgery because he believed that as a surgeon, he would heroically make more of a difference to people's lives than as a general practitioner. But he's now seen convincing evidence that primary care "has the greatest overall impact, including lower mortality and better health, not to mention lower medical costs."

How is this possible? To find out, Gawande visited a medical clinic in the Boston neighborhood of Jamaica Plain and observed the staff (doctors, physician assistants, a nurse, a pharmacist, a nutritionist, and three social workers) as they ministered to the aches and pains and concerns of a steady stream of patients. Gawande realized that the secret to the impact of seemingly mundane primary care was a combination of expertise, thoughtful diagnosis and observation, incremental improvement, and above all long-term relationships in which the clinic staff came to know the details of each person's medical history and patients came to know and trust the staff and show up if something was bothering them.

"Observing the care," says Gawande, "I began to grasp how the commitment to seeing people over time leads primary-care clinicians to take an approach to problem-solving that is very different from that of doctors, like me, who provide mainly episodic care." The clinic staff are "incrementalists," he says. "They focus on the course of a person's health over time – even through a life. All understanding is provisional and subject to continual adjustment… Success, therefore, is not about the episodic, momentary victories, though they do play a role. It is about the longer view of incremental steps that produce sustained progress. That, such clinicians argue, is what making a difference really looks like. In fact, it is what making a difference looks like in a range of endeavors."

Gawande goes on to describe another situation involving incremental versus heroic intervention. In December 1967, a critical link in the chain-suspension system of the Silver Bridge over the Ohio River snapped with a loud bang. In less than a minute, most of the 2,235-foot span supporting 75 vehicles fell into the river 80 feet below, killing 46 people and injuring dozens more. An investigation by the National Transportation Safety Board revealed that corrosion on the 1928 bridge, combined with the fact that it was designed to handle Model T traffic, was responsible for the collapse. Up to that point, occasional disasters like this had been regarded as random and unavoidable. Now people realized they could be prevented by periodic inspections and repairs – and that applied to all 600,000 bridges around the country.

But despite what was learned from the Silver Bridge disaster, not nearly enough resources were put into inspection and repair in the years that followed. As a result, there are still almost 150,000 problem bridges in the U.S., and several collapse every year, sometimes causing loss of life. "Based on the lack of public response, structural engineers have judged this to be 'in the tolerable range,'" says Gawande. More funds go to rescue operations and to building new bridges, and "It's obvious why," he says. "Construction produces immediate and visible success; maintenance doesn't. Does anyone reward politicians for a bridge that doesn't crumble?" The same situation exists with dams, levees, roads, sewers, and water systems – and not just in the U.S.: "Governments everywhere tend to drastically undervalue incrementalism and overvalue heroism."

Incrementalists "want us to take a longer view," says Gawande. "They want us to believe that they can recognize problems before they happen, and that, with steady, iterative effort over years, they can reduce, delay, or eliminate them. Yet incrementalists also want us to accept that they will never be able to fully anticipate or prevent all problems. This makes for a hard sell. The incrementalists' contribution is more cryptic than the rescuers', and yet also more ambitious. They are claiming, in essence, to be able to predict and shape the future. They want us to put our money on it."

Around the time of the Silver Bridge collapse, the medical profession had little to offer patients in the way of prevention. Illness was seen as a random catastrophe and doctors focused mainly on rescue and insurance for unanticipated, episodic needs. Money was poured into heroics and incrementalists were scanted. But by the late 1960s, scientists were discovering the long-term significance of high blood pressure, diabetes, and other conditions and figuring out treatments that could save lives. "Seemingly random events were becoming open to prediction and alteration," says Gawande. "There is a lot about the future that remains unpredictable. Nonetheless, the patterns are becoming more susceptible to empiricism – to a science of surveillance, analysis, and iterative correction. The incrementalists are overtaking the rescuers. But the transformation has itself been incremental. So we're only just starting to notice." The big salaries still go to surgeons and the like, while primary-care physicians and others in less-glamorous areas of medicine make half as much.

Gawande says four kinds of information are important to a person's health and well-being over time: [Think about parallels in schools.]

- Your internal systems – from imaging and lab tests;
- Your living conditions – housing, community, economic, and environmental data;
- The state of the care you receive – what practitioners have done and how well they did it, what medications and other treatments they have provided;
- Your behaviors – patterns of sleep, exercise, stress, eating, sexual activity, and adherence to treatments.

The potential of this information is enormous, especially now that we can monitor some of it through wearable devices and smartphones. But the potential will be unlocked only if we commit the resources to primary care. "As an American surgeon," says Gawande, "I have a

battalion of people and millions of dollars of equipment on hand when I arrive in my operating room. Incrementalists are lucky if they can hire a nurse."

One of the biggest causes of early death is hypertension, which can result in a stroke, heart attack, dementia, and other serious problems. Thirty percent of Americans have high blood pressure and only half are adequately treated. "Good treatment for hypertension is like bridge repair," says Gawande: "It requires active monitoring and incremental fixes and adjustments over time but averts costly disasters. All the same, we routinely skimp on follow-through… More than a quarter of Americans and Europeans who die before the age of seventy-five would not have died so soon if they'd received appropriate medical care for their conditions, most of which were chronic."

"In this era of advancing information," Gawande concludes, "it will become evident that, for everyone, life is a preexisting condition waiting to happen… But this is also an opportunity. We have the chance to transform the course of our lives. Doing so will mean discovering the heroism of the incremental."

"Tell Me Where It Hurts" by Atul Gawande in *The New Yorker*, January 23, 2017, http://bit.ly/2jXaWRy

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2. Ten Keys to Effective Teacher Leadership

"The work of a teacher leader is often undefined, unsupported, and sometimes unrecognized and undervalued, thus limiting the potential for positive impact," say Joellen Killion and five colleagues in this *Learning Forward* white paper. The authors believe teacher leadership is more than the usual outside-the-classroom roles taken on by teachers – committee member, team leader, curriculum writer, department chair, association leader. These and other roles are important, but they are often narrowly defined, inflexible, and structured to carry out the expectations and desires of higher-ups. Teachers may conclude that to have true leadership power, they need to leave the classroom and become administrators.

Killion and her colleagues make the case for a more-ambitious definition of teacher leadership that has real impact on teaching and learning without leaving the classroom. Because teachers are in daily contact with students, the authors argue, they "are in the best position to make critical decisions about issues related to teaching and learning. Moreover, they are better able to implement changes in a comprehensive and continuous manner. Expanding teacher roles also serves an ongoing need to attract and retain qualified teachers for career-long, rather than temporary, service… It is a transformation of the way educators work within schools every day to strengthen culture and professional practices and enhance professional learning opportunities leading to student success."

Killion et al. list the prerequisites for successful teacher leadership: (a) a clear definition of purpose, roles, and responsibilities; (b) supportive conditions, including relational trust, collective responsibility, commitment to continuous improvement, recognition and celebrations, and a degree of autonomy; (c) the right dispositions, including a deep

commitment to student learning, open-mindedness and humility, courage and a willingness to take risks, confidence, flexibility, and decisiveness, and a passion for ongoing learning; and (d) continuous assessment of impact. Here are the key considerations for getting the most out of teacher leadership:

• *There is a variety of teacher-leadership roles*. These include mentoring and coaching peers; promoting and facilitating professional learning and collaboration; designing, implementing, and supporting school and district change efforts; contributing to research and policy; and serving as spokespersons for their schools, districts, and the profession.

• *Teacher leadership often operates outside of official structures*. "For teachers, leadership is more about influence than power and authority," say Killion et al. "More often, teacher leaders act without formal designation as leaders… [T]he most important form of leadership occurs when teachers recognize a need and step in to help address it."

• *District leaders' beliefs really matter*. Most important is accepting the potential of shared/distributed leadership, valuing the expertise of teacher leaders, engaging them in significant and authentic leadership responsibilities, and giving honest, learning-focused feedback.

• *All teachers can lead*. This could take the form of helping to mentor and support novice members of the profession, adding to the body of craft knowledge, or collaborating with peers to influence professional practice. It's helpful when schools and districts provide roles for teacher leaders to contribute.

• *Support for teacher leaders is key*. This can take the form of coaching and mentoring from administrators and more-experienced peers, networking opportunities, and regular feedback from a knowledgeable colleague.

• *Certain competencies are essential for teacher leaders*. These include knowledge about the design, implementation, and evaluation of professional learning; interpersonal skills to build trusting relationships within the organization; engaging peers and administrators in collaborative learning; ensuring that student learning should be the focus of all decisions; and the belief that all students and teachers can grow and succeed. "As servant leaders," say Killion et al., "teacher leaders understand that their belief in others' capabilities and conveying that belief in words and actions will result in ordinary people accomplishing extraordinary things."

• *Teacher leaders need courage and flexibility*. They must be open to criticism from others and "cross back and forth between the boundaries of the teaching arena and the leading arena," say the authors. "For that reason, teacher leaders are called on to embrace ambiguity and to be flexible as their work unfolds and as they and their peers grow comfortable with their new responsibilities and identity as a leader."

• *Teacher leaders take responsibility for their own professional development and the development of others*. They operate from a growth mindset and "have as much vested in the growth of their colleagues as they do in their own growth," say Killion et al.

• *Teacher leaders foster collaborative cultures*. "They catalyze a sense of urgency and efficacy among adults and engender peer-to-peer accountability and collective responsibility

for the success of every teacher and student," say Killion et al. They foster a climate of peer support and continuous improvement.

• *Teacher leaders are driven by evidence*. They continuously collect data on their impact on teaching and learning and the factors that make a difference in their schools and districts.

"A Systemic Approach to Elevating Teacher Leadership" by Joellen Killion, Cindy Harrison, Amy Colton, Chris Bryan, Ann Delehant, and Debbie Cooke in *Learning Forward*, November 2016, http://bit.ly/2jKYgKl

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3. Doug Lemov on Building Students' Knowledge As They Read

(Originally titled "How Knowledge Powers Reading")

In this article in *Educational Leadership*, author/school leader Doug Lemov drives home E.D. Hirsch's message [see Memos 130, 233, and 509] about the crucial role of background knowledge in building reading comprehension, deep thinking, and creativity. But isn't knowledge less important now that students can Google pretty much any piece of information? To the contrary, says Lemov: "The brain's active processing capacity is finite, so unless knowledge is encoded in long-term memory, having to search for it actually crowds out other forms of cognition. Knowing things helps you think and read successfully. At the same time, reading is a primary way to come to know things. Every time we read and comprehend a text, we add to the knowledge that helps us make sense of further texts. In other words, when it comes to reading, knowledge is both the chicken and the egg."

Possessing and adding to background knowledge is especially important when students read nonfiction – but there's a problem with motivation. "With the exception of memoir and biography," says Lemov, "nonfiction rarely tries to win the reader's interest with an engaging narrative voice. The tone is more often something like, 'I've got some information here; stay with me if you can.'" He suggests three ways to improve students' success reading and learning from nonfiction:

• *Embed nonfiction in fiction* – Lemov confesses that when he was a teacher working with nonfiction texts, he did what many others did – had his students look for chronological order, organization, evidence, subheads, captions, and other structural elements. Students did not respond well because this approach didn't make an emotional or intellectual connection to the text. As a counterexample, Lemov describes how fifth graders reading *Lily's Crossing,* a novel about a girl in New York City during World War II, were assigned an article on rationing. Students eagerly read an otherwise dry text because they cared about a fictional character who was experiencing rationing. Students also learned new facts (what is "fuel oil" and why was it important in the 1940s) and, as their teacher had them read additional nonfiction articles on victory gardens, blackout curtains, the Nazi bombing of London, spies, and the U.S. decision to enter the war, reading the novel turned into an in-depth study of a historical period.

• *Ask text-based questions* – Teachers often ask students to predict, make inferences, interpret character information, and summarize as they read. But Lemov says there's evidence

that practicing answering skill-based questions like these won't necessarily carry over to new reading matter. Better, he says, to mix those questions with questions about the *content* of the text. For example, when students are reading a novel set during the U.S. Civil War, the teacher might ask how most soldiers died during the war (of disease, not combat injuries) and what in the novel told that. "These fact-based questions are actually surprisingly rigorous," says Lemov, "and like the more common questions, they could have led to a fascinating discussion… By asking some fact-based questions, we can chip away at the knowledge deficit and teach our students how to unlock knowledge from what they read." And the information, as well as the process involved in locating it, would carry over to other settings and time periods.

• *Have students write before discussing* – "Students routinely appear to understand what they read far more than they actually do – simply because of the way we structure our instruction," says Lemov. He describes how he aced a college paper on Shakespeare's *The Winter's Tale* without actually reading the play. How was that possible? By listening to other students during a class discussion and dipping into a scene or two as he wrote the paper that evening. "The fact that my professor thought I had read and understood the play made her, I now realize, typical of many teachers," he says. A simple way to get around this kind of fake reading is to have students read a text and write about it in class and then take part in a discussion. A possible follow-up: having students revise what they wrote. All this would greatly enhance the knowledge students gained from their reading – and also build their reading proficiency.

"How Knowledge Powers Reading" by Doug Lemov in *Educational Leadership*, February 2017 (Vol. 74, #5, p. 10-16), http://bit.ly/2k5svOz; Lemov can be reached at dlemov@uncommonschools.org.

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4. How Difficult Should Adolescents' Reading Material Be?

"Do students need to read texts at their level, or do they need to read challenging texts?" asks adolescent literacy expert Sarah Lupo (University of Virginia) in this article in *Literacy Today*. "What about the struggling readers?" The traditional view is that students should be matched with material at their instructional level – word recognition from 95-98 percent, comprehension from 75 to 89 percent. Lupo delved into the research and found surprisingly little guidance for secondary educators, but there were two important take-aways:

• *Rigorous texts*. All students need to engage with material that has rich vocabulary, complex sentence structure, and complicated themes and ideas – in other words, texts that challenge them to make inferences, draw their own conclusions, and reach a higher level of analysis. "However," says Lupo, "rigorous texts must be accompanied by an appropriate amount of scaffolding and support, especially for students who struggle." This includes pre-reading support with vocabulary, background knowledge, and structure geared specifically to the text.

• *Easier texts*. Reading less-challenging material is also important, especially for students reading below grade level. Such texts improve fluency, motivation, and engagement while building vocabulary and background knowledge and connecting ideas and concepts necessary to grasp higher-level content material. However, Lupo stresses, a diet composed only of easier texts may "stunt" adolescents' comprehension. The formula for success, she says, is pairing a rigorous text with one or more easier texts on the same subject. Two examples:

Before students tackled Shakespeare's *Macbeth*, they read a less-challenging article about Shakespeare's era and another about how ice skater Tonya Harding hired a thug to attack rival Nancy Kerrigan so she wouldn't be able to compete in the Winter Olympics. This sparked a lively discussion about people who are willing to do anything to get what they want, teeing up students' reading of *Macbeth*.

Before ninth grade biology students tackled a research article on sickle cell anemia, they read an easier article about Gregor Mendel's key findings, introducing them to dominant and recessive traits, allele, hybrid, and genes. Students then read an article on the controversy surrounding "designer babies" and discussed whether people should be allowed to choose the traits of their offspring to avoid diseases. This launched them into reading a much denser article with background knowledge, vocabulary, and real curiosity.

"Rigor vs. Ease: What Should Adolescents Read?" by Sarah Lupo in *Literacy Today*, January/February 2017 (Vol. 34, #4, p. 30-31), www.literacyworldwide.org; Lupo can be reached at sarahlupo@virginia.edu.

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5. Answers to Questions About Disciplinary Literacy

(Originally titled "Disciplinary Literacy: Just the FAQs")

In this article in *Educational Leadership*, Timothy Shanahan and Cynthia Shanahan (University of Illinois/Chicago) answer some common questions about disciplinary literacy.

• *Why do we need disciplinary literacy standards?* Literacy differs by discipline, say the Shanahans – vocabulary, sentence structure, use of graphic information, etc. Historians read different kinds of texts than scientists. A history text uses maps, perhaps a painting depicting the signing of the Declaration of Independence, while a science text is quite different. "Understanding how to move among prose, equations, diagrams, tables, plots, and photos is an essential science reading skill," say the authors. "Disciplinary literacy instruction aims at fostering an awareness of such specialized text features as well as an ability to negotiate them successfully."

• *Should English teachers teach science and history skills?* No, say the Shanahans; math literacy should be taught in math classes, science literacy in science classes, and so on, "not as some kind of decontextualized adjunct." As Steve Martin once quipped, "Talking about music is like dancing about architecture."

• *Don't disciplinary subjects already have their own standards?* Yes, but they usually address knowledge, not the field's unique approach to reading, writing, speaking, listening, and language use.

• *Why aren't there elementary disciplinary literacy standards?* Elementary texts most often present material in general ways, with disciplinary literacy emerging in the middle grades. Elementary students can apply generic skills across all disciplines.

• *What disciplinary skills pertain to English?* English teachers are responsible for general literacy skills, vocabulary, grammar, spelling, and mechanics, which students use across the curriculum. There are ELA-specific terms like metaphor, symbolism, and allusion, and specific skills when students read poems, novels, and short stories.

• *Are disciplinary literacy skills the same as content-area reading skills?* No, say the Shanahans. Generic content skills like locating and memorizing information are important and can be used across disciplines, but discipline-specific skills like comparing multiple accounts of a historical event and evaluating different perspectives are in another league.

• *What's the right balance between content-area and disciplinary literacy?* The latter is appropriate when a teacher wants to go beyond simple knowledge acquisition – for example, teaching students to compare and contrast treatments of the same topic in several primary and secondary historical sources and evaluating the reliability of a source.

• *What about cross-disciplinary applications?* Should an English teacher working on *The Hunger Games* have math students study the probability of Katniss's and Prim's names being drawn during the reaping? The Shanahans are skeptical about this kind of application and say "it's definitely not what disciplinary literacy is all about… Transforming the beauty and power of literature into an alternative source of content information is not appropriately respectful of the intellectual work of those other fields, not does it promote the true value of literary thought."

• *Who is responsible for ensuring that disciplinary literacy is taught?* Curriculum directors, principals, and department heads need to clarify who is responsible for what and provide the necessary PD, materials, and support.

"Disciplinary Literacy: Just the FAQs" by Timothy Shanahan and Cynthia Shanahan in *Educational Leadership*, February 2017 (Vol. 74, #5, p. 18-22), available for purchase at http://bit.ly/2kkulvn; the authors can be reached at shanahan@uic.edu and chynd@uic.edu. See items 6b, 6c, and 6d below for additional resources.

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6. Short Items:

a. Getting teens reading – This website www.adlit.org/media has a trove of multimedia resources on young adult literature and teaching literacy to adolescents.

"Screen Grab: Rope Teens Into Reading" in *Educational Leadership*, February 2016 (Vol. 74, #5, p. 9)

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b. Model curriculum units on disciplinary literacy – The Southern Regional Education Board has produced a number of history, literacy, and science units for secondary schools: www.sreb.org/node/1628/done.

"To Learn More About Disciplinary Literacy", a sidebar in "Disciplinary Literacy: Just the FAQs" by Timothy Shanahan and Cynthia Shanahan in *Educational Leadership*, February 2017 (Vol. 74, #5, p. 18-22)

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c. Reading Like a Historian – Stanford University has developed five videos on this curriculum: www.teachingchannel.org/videos/reading-like-a-historian-curriculum.

"To Learn More About Disciplinary Literacy", a sidebar in "Disciplinary Literacy: Just the FAQs" by Timothy Shanahan and Cynthia Shanahan in *Educational Leadership*, February 2017 (Vol. 74, #5, p. 18-22)

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d. Curated materials on disciplinary literacy – Reading in the disciplines can be accessed at https://sites.google.com/site/readinginthedisciplines/home, and the Wisconsin Department of Public Instruction's Literacy in All Subjects is available at http://dpi.wi.gov/standards/literacy-all-subjects.

"To Learn More About Disciplinary Literacy", a sidebar in "Disciplinary Literacy: Just the FAQs" by Timothy Shanahan and Cynthia Shanahan in *Educational Leadership*, February 2017 (Vol. 74, #5, p. 18-22)

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If you have feedback or suggestions,
***please e-mail* kim.marshall48@gmail.com**

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 45 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 60 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 50 issues a year).

Subscriptions:

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Core list of publications covered

Those read this week are underlined.

American Educational Research Journal
American Educator
American Journal of Education
American School Board Journal
AMLE Magazine
ASCA School Counselor
ASCD SmartBrief
Communiqué
Ed. Magazine
Education Digest
Education Gadfly
Education Next
Education Update
Education Week
Educational Evaluation and Policy Analysis
Educational Horizons
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
English Journal
Essential Teacher
Exceptional Children
Go Teach
Harvard Business Review
Harvard Educational Review
Independent School
Journal of Adolescent and Adult Literacy
Journal of Education for Students Placed At Risk (JESPAR)
Journal of Staff Development
Kappa Delta Pi Record
Knowledge Quest
Literacy Today
Mathematics in the Middle School
Middle School Journal
Peabody Journal of Education
Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Responsive Classroom Newsletter
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Teacher
Teachers College Record
Teaching Children Mathematics
Teaching Exceptional Children
The Atlantic
The Chronicle of Higher Education
The District Management Journal
The Journal of the Learning Sciences
The Language Educator
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time Magazine