Marshall Memo 818

A Weekly Round-up of Important Ideas and Research in K-12 Education
January 6, 2020

In This Issue:

Quotes of the Week

"We are told that they taught us nothing at Eton. It may be so, but I think they taught it very well."

> Lord Plumer, commenting on the teaching of Latin and Greek at his British boarding school (quoted in *Gilded Youth: Privilege, Rebellion, and the British Public School* by James Brooke-Smith, Reaktion Books, 2019)

"The biggest obstacle to teaching slavery in America is the deep, abiding American need to conceive of and understand our history as 'progress,' as the story of a people and a nation that always sought the improvement of mankind, the advancement of liberty and justice, the broadening of pursuits of happiness for all."

> Yale historian David Blight (quoted in "The Fight Over the 1619 Project Is Not About the Facts" by Adam Serwer in *The Atlantic*, December 23, 2019, https://bit.ly/36tjEeF)

"To help organize data and find the most important elements in any situation, you ask three questions: What do I know? What don't I know? If I could get more information, what do I need to know?"

> Amy Herman (see item #1)

"Focusing all of our attention on benchmarks and checking off boxes will inhibit a complete and accurate analysis from the start."

> Amy Herman (*ibid.*)

"It's not about whether intuition or analysis is best. The real skill in decision-making, problem-solving, creativity, whatever, is blending those two things together. And in a way that's kind of a lifetime project, isn't it."

> Eugene Sadler-Smith (quoted in item #2)

1. When Observing, Being Aware of Our Biases and Perceptual Filters

In her book *Visual Intelligence*, Amy Herman says that what we see (observing a classroom, for example) can be influenced by:

- Our likes and dislikes;
- Our mood and how we feel physically;
- Our own experiences or the experiences of those close to us;
- Our professional and personal desires, ambitions, and failures;
- Information passed on by a friend or colleague;
- Websites, TV, and books recently perused;
- Our upbringing and education;
- Our values, morals, culture, religious beliefs, and political beliefs.

"To effectively observe, perceive, and communicate factual truths," says Herman, "we must be able to account for our biases and, in many cases, overcome them… The more familiar we are with what might alter our observations, the more astute and accurate they will be. When you're asked to report objectively on something, ask yourself if you are reporting raw observational data or assumptions about observational data drawn after running it through the filter of your own personal experience."

Herman lists three of the most common perceptual filters when we observe and try to draw objective conclusions:

• *Seeing what we want to see* – This includes confirmation bias, wishful seeing, tunnel vision, and the frequency illusion (when you're buying a new car, you suddenly see that same kind of car everywhere). This filter, says Herman, "puts us at risk of gathering information selectively, subconsciously seeking data that support our expectations and ignoring those that don't." This can have serious consequences when an interviewer focuses only on the information that reinforces existing opinions, a police officer engages in racial profiling, or a teacher gives more wait-time to a high-performing student.

• *Seeing what we're told to see* – "The integrity of our search for facts can be compromised when we look for what we think we need to find," says Herman. "Focusing all of our attention on benchmarks and checking off boxes will inhibit a complete and accurate analysis from the start."

• *Not seeing change* – "Considering that our brain encounters an estimated eleven million bits of information every second, and knowing the finite nature of what we can process and pay attention to, change blindness isn't that surprising," says Herman. To correct the

tendency to assume that things remain the same over time, we have to constantly remind ourselves that nothing is static for long.

"No two jobs, classrooms, crime scenes, customers, students, patients, people, or problems are the same," says Herman. "There is no such thing as the same pneumonia, the same second-grader, or the same business deal. Every person and situation is unique. To treat them otherwise is to deceive them and ourselves… To help organize data and find the most important elements in any situation, you ask three questions: What do I know? What don't I know? If I could get more information, what do I need to know?"

Visual Intelligence by Amy Herman (Houghton Mifflin Harcourt, 2016)

Back to page one

2. How Much Can We Rely on Intuition?

"Humans have strong intuitions about other people," says science writer Matthew Hutson in this article in *Psychology Today*. "That's because character judgment has such dire consequences, and because we have so much experience with it, over our lifetimes and over evolution." Intuition, says German psychologist Gerd Gigerenzer, is a form of "unconscious intelligence that is as needed as conscious intelligence." In this article, Hutson describes eight situations where intuition excels, where it serves us less well, who uses it, when we should trust it, and how it can be improved.

• *Intuition is highly efficient, if we don't think about it too much*. "We're fairly good at judging people based on first impressions, thin slices of experience ranging from a glimpse of a photo to a five-minute interaction," says Hutson, "and deliberation can be not only extraneous but intrusive." In a classic study by Nalini Ambady, students' ratings of a professor after watching silent 10-second video clips corresponded closely with other students' end-of-semester ratings. But when those who saw the short clips were asked to spend a minute writing down the reasons for their quick evaluation, accuracy dropped dramatically. Analysis was less accurate than "the complex interplay of subtle signals from a holistic impression."

• *We get too deeply attached to intuitive beliefs*. "Once an intuition hits, we cling to it despite the dangers," says Hutson. This can happen when we have a superstitious fear about flying based on a dream about a plane crash, take an instant dislike to someone ("I don't trust this car salesman; I can't tell you why, but I'm confident I don't like him"), or with racial prejudice.

• *Intuition can be improved with practice*. But this works only in areas where there are regularities linking events and outcomes – for example, firefighting commanders sizing up a burning building (because fires usually follow certain laws of physics). This is not true of the global economy, which is very difficult to predict (most experts failed to predict the 2007 housing crash). Studies have found that weather forecasters, test pilots, and chess masters have more-reliable expertise than psychologists, admissions officers, and judges. Unfortunately, good intuition in one domain doesn't predict good performance in another. One of the best

ways to improve performance in challenging situations is doing "pre-mortems" – thinking about what could go wrong with a plan and strategizing to avoid those problems.

• *Intuition is different from insight*. Insight is sensing; intuition is seeing a solution to a problem, more like a judgment or hypothesis based on objective data. Intuition can help guide us to insights, but not always.

• *Stress triggers intuition, sadness doesn't*. Under pressure, we default to intuition (run from the tiger!), but not always with the best results (over a cliff). When we're feeling down, we tend to think more analytically and solve problems better.

• *Some people are more intuitive than others*. There are clear personality differences in this area, captured in a common research scale, Faith in Intuition (FI), which uses questions like, "I believe in trusting my hunches." Another scale rates people with questions like, "I generally make decisions that feel right to me," which is more correlated with a person's recognition of social norms and peer acceptance. People who put faith in intuition pay a price, says Hutson. They report more setbacks – missing a flight, getting divorced – and more magical thinking – astrology, ghosts, luck, gender stereotypes. It's a good idea for people to be aware of how intuitive they are, pick a career accordingly (accountant versus counselor), and, if they're more intuitive, build in extra time for decisions where snap judgments might lead to problems.

• *Morality intuitions are easily swayed*. Psychologist Jonathan Haidt (New York University) says there are five "moral foundations" that guide human behavior: fairness, loyalty, authority, purity, and avoiding harm. Studies show that political liberals tend to prioritize fairness and harm avoidance, while conservatives prioritize loyalty, authority, and purity. But people's intuitions on big moral questions can be shaped by catering messages to their preferred values – for example, when conservatives were asked to look at universal health care through the lens of purity (fewer diseased Americans) versus fairness (health care for all), more conservatives expressed support for Obamacare; and when liberals were asked to look at military spending in terms of fairness (fighting inequality) versus authority (American superiority), they expressed more support.

• *You can read people by reading their e-mails, tweets, posts, and dating ads*. "Increasingly," says Hutson, "we must assess each other via snippets of text rather than, say, darting eyes or kind smiles, but that doesn't hold back our snap judgments." Studies show that people make pretty consistent judgments of others based on online behaviors like curse words, expressions of anger, exaggeration, use of the past tense, cognitive words like *know*, exclamation marks, and emojis.

Hutson concludes with the words of Eugene Sadler-Smith (Surrey Business School): "It's not about whether intuition or analysis is best. The real skill in decision-making, problem-solving, creativity, whatever, is blending those two things together. And in a way that's kind of a lifetime project, isn't it."

"8 Truths About Intuition" by Matthew Hutson in *Psychology Today*, January/February 2020 (pp. 55-63, 90), no e-link available

Back to page one

3. Four Principles for Giving Feedback to Students

In this article in *Middle School Journal*, Alison Koenka (Virginia Commonwealth University) and Eric Anderman (The Ohio State University) describe how teachers in two different classrooms handled a discussion with their seventh graders as they read Lois Lowry's novel, *The Giver*. Each teacher asked the same question – "What do you think is the theme of this book?" – and in both classes there were lots of hands in the air and the teachers called on one student. But then the classes diverged:

- In the first, the student who was called on shared an enthusiastic comment about the book's theme of memory. The teacher nodded and said, "Yes, anyone else?" The student slumped back in his seat and no other students offered to contribute.
- In the second class, the teacher responded, "Yes, memory is certainly an important theme. Now, let's enrich that response further by also explaining what makes it so important, and supporting our arguments with specific examples from the book." The student who responded sat up a little straighter and flipped through her book looking for examples. Other students were eager to join the discussion.

The key difference, say Koenka and Anderman, was "specific, student-centered information delivered to students about their performance in a motivation-building way." The authors suggest four characteristics of the most effective feedback:

• *Specific* – Written comments on students' work (spelling out why it was good and what could be improved or extended) have a far more positive impact on motivation and performance than grades or generic praise ("Good work"). With formative assessments, there's an argument for giving comments and no grades.

• *Task-focused, self-referenced, with identifying next steps* – Feedback should target specific features of students' performance, refer to their own previous performance, and identify what needs to be done next. These components are especially important for middle-school students, say Koenka and Anderman, because they make the feedback informational rather than controlling, supporting early adolescents' "burgeoning need for autonomy." The informational approach also encourages the development of self-efficacy – confidence in one's own ability to complete tasks successfully. Commenting on students' writing using track changes and comment boxes is a great way to give focused, self-referenced, and a next-step focus. Providing comments via video livestreaming is even more effective.

• *Not norm-referenced* – Comparing students' performance to that of their peers is especially damaging for middle-school students because of their heightened sensitivity to the opinions of their contemporaries. A teacher's comments, however well-meaning, about the "best lab report in the class" or a "terrific class average" are not helpful to students who didn't do so well. And counterintuitively, praise isn't good for students who are singled out because it may set them up for ostracism and communicate that it's all about outperforming others rather than the intrinsic benefits of learning.

• *Not about personal characteristics* – The trap with comments like "You're a natural writer" and "You were born to be a scientist" is that the traits are seen by students as innate and

unchangeable. This encourages a fixed versus a growth mindset, definitely not helpful to improving performance. Students may react positively in the moment, but it will sap their motivation and willingness to take risks and deal with more-challenging work down the road. Koenka and Anderman say that fixed-mindset thinking is especially unhelpful to middle-school students since they are just forming their adult identities.

"Personalized Feedback as a Strategy for Improving Motivation and Performance Among Middle-School Students" by Alison Koenka and Eric Anderman in *Middle School Journal*, November 2019 (Vol. 50, #5, pp. 15-22), https://bit.ly/2FmHKfv; the authors can be reached at koenkaac@vcu.edu and anderman.1@osu.edu.

Back to page one

4. Can Young Children Understand Natural Selection?

In this *Journal of the Learning Sciences* article, Kathleen Emlen Metz (University of California/Berkeley) and seven colleagues say that evolution is one of the most important concepts of life science, but it is often not well understood by high-school and college students, the general public, and even science graduate students. What's more, misconceptions about evolution are tenacious and hard to dislodge. Therefore, say Metz and her colleagues, "Designing pedagogical approaches that more adequately support a robust understanding of evolution constitutes a fundamental challenge to science educators and learning scientists."

Would it make sense to start in the elementary grades? Believing that early intervention might make a difference, the researchers taught second and third graders the basics of natural selection. Many students this age have important misconceptions – for example, that an animal's acquired characteristics (e.g., stronger legs) are passed along to its offspring. But children at this age also have some understandings on which instruction can build:

- They believe that each kind of animal has an inherited internal essence (an elephant is like its mother and father);
- There is lots of variation within each species (in humans, hair color, height, skin color);
- By third grade, many children have a sense of randomness and uncertainty in patterns of outcomes across many repetitions (dice landing on different numbers).

Building on these emerging understandings (which coexist with the misconceptions), Metz and her colleagues taught second and third graders the simplest level of microevolution. They started by teaching about two dimensions that are a key part of natural selection and evolution:

- The *fit* between organisms and their environment – for example, a rainforest plant can't survive in the desert because it needs more water to stay alive;
- The change *process* – for example, if an organism has a trait that helps it survive to reproductive age, it will pass that trait along, increasing the trait's frequency in the population; and changes in the environment can affect survival value of the trait in future generations.

At the most sophisticated level, these two dimensions come together in seeing natural selection as an explanation of a good fit between organisms and their environment.

Students were introduced to these concepts in two 30-hour modules using discussion, videos, classroom animals, field work, and mystery questions about plants, rats, zoo animals, butterflies, crickets, guppies, wolves, and dogs. The curriculum started with students categorizing and discussing the defining characteristics of animals, followed by analyzing some David Attenborough nature videos to see the broad range of environments in which animals live, followed by looking again at the videos to consider how animals get their needs met under very different conditions, including tundra, rainforest, and desert. Students then observed rats in an enclosure in their classroom to identify behaviors and explore the difference between observation and inference.

Here are a few examples of the questions the researchers asked as students observed various environments:

- How can animals who live in this environment get their needs met? (fit between organisms and environment)
- What's easy for them to get in this environment? What is difficult? (environment-limiting factors)
- How do you think this rat behavior (e.g., whisker wiggling, head bobbing, body swaying) helps the rat survive?
- How is our theory different from current thinking of animal behaviorists (including where the experts are still not sure)?
- How would a change in the environment affect a population over time? For example, what would happen to male lions with large manes if the savanna gets too hot? In research posters, students symbolically represented how the relative frequency of different size manes would change over time within the population – and why.

After the first round of instruction, the researchers examined where children fell short conceptually and where the instruction wasn't effective and made strategic adjustments to the next stage of the curriculum.

Metz and her colleagues were impressed with how readily students took to the concepts, how they retained knowledge and understanding from the first to the second module (separated by several months), and how well they grasped the key concepts. By the second round of instruction, the majority of students were able to predict the impact of an environmental change on the population over time, thinking through which organism traits would be increasingly less common and which would become more common. Thus they understood the idea of traits' differential survival value, how a change in the environment can affect the survival value of traits, and in turn how the relative distribution of those traits can gradually shift over time. Although students' "understanding of natural selection was basic," conclude Metz and colleagues, "omitting key aspects and dimensions of evolution, their understanding encompassed core ideas that undermine robust and ubiquitous misconceptions."

The researchers believe there were two reasons for the success of this curriculum intervention: (a) they built on the intuitions students brought to science classrooms (in this case, ideas about variation, uncertainty and randomness, and structure and function), and

(b) the instructors modified their approach as they observed how students responded. Metz and her colleagues concluded that young students are able to handle concepts that are normally reserved for much older students, and that the students who took part in the two modules were poised to understand more-sophisticated evolution concepts in the upper grades.

"Primary-Grade Children's Capacity to Understand Microevolution: The Power of Leveraging Their Fruitful Intuitions and Engagement in Scientific Practices" by Kathleen Emlen Metz, Amy Cardace, Eric Berson, Uyen Ly, Nicole Wong, Stephanie Sisk-Hilton, Emlen Metz, and Mark Wilson in *The Journal of the Learning Sciences*, September-December 2019 (Vol. 28, #4-5, pp. 556-615), https://bit.ly/2FlGWYe; Metz can be reached at kmetz@berkeley.edu.

Back to page one

5. Literature Circles in a Brooklyn High School

In this article in *English Journal*, New York City teacher Nicole Moskal describes how she applies Christopher Emdin's "reality pedagogy" Five C's to literature circles in her classes:

• *Content* – the academic work: Monday through Thursday, Moskal's students receive instruction that includes direct note-taking, grammar skills practice, and collaborative analysis of grade-level tests. Literature circles happen on Fridays and are organized in six thematic units over the year, with students perusing and rank-ordering books on the first day of each unit (a student once said, "Yo, for real, I'm gonna buy all these books on Amazon, because they're all too good!").

• *Context* – including artifacts from students' communities: Moskal says that when she first used literature circles, she made the mistake of mandating books that her students found uninteresting, spent too much class time on silent reading, and expected discussions to last more than twenty minutes. Now she asks students what they're reading, listens to casual conversations, looks up songs students recommend, and presents a wide variety of books. Here are some that her students have rated highest over the years:

- *The Color Purple* by Alice Walker
- *Dear Martin* by Nic Stone
- *First They Killed My Father* by Loung Ung
- *Franz Kafka's The Metamorphosis* (a graphic novel) by Peter Kuper
- *The Hate U Give* by Angie Thomas
- *If You Could Be Mine* by Sara Farizan
- *A Long Way Gone: Memoirs of a Boy Soldier* by Ishmael Beah
- *Lord of the Flies* by William Golding
- *The Lovely Bones* by Alice Sebold
- *Marcelo in the Real World* by Francisco Stork
- *No Ashes in the Fire* by Darnell Moore
- *Parable of the Sower* by Octavia Butler
- *Sold* by Patricia McCormick
- *Short Stories from Street Lit: Teaching and Reading Fiction in Urban Schools* by Andrew Ratner

- *Touching Spirit Bear* by Ben Mikaelsen

Clearly students aren't selecting just one type of book, says Moskal: "Expecting that all children who are African American or Latinx want to read 'street' literature is just as damaging as not acknowledging voices of color in the classroom. There is diversity among races and ethnicities."

• *Cogenerative dialogues* – discourse relevant to students: At the kickoff of each literature unit, students settle into literature groups with their chosen book (perhaps it's a second choice) and Moskal works with the class on group norms, consequences for coming to their group unprepared, and the reading schedule for assigned meeting dates. Her goal is for groups to be invested in their own group process and begin a productive dialogue over several weeks of Friday meetings, with her monitoring the process and intervening when necessary.

• *Coteaching* – students teaching each other and the class: In the first cycle of the year, one group is usually handling its literature circle discussions especially well, and Moskal has them model their process in a fishbowl so other students can see what it should look and feel like. She also suggests a discussion protocol, *Save the Last Word for Me*, to maximize listening and responding to each other in productive ways. As the weeks pass, students become more and more proficient at coaching and teaching each other, which is especially helpful when groups have wide differences in reading proficiency. Occasionally groups aren't having good discussions or run out of substantive content, and Moskal intervenes and gives them supplementary tasks.

• *Cosmopolitanism* – the bonds that unite all human beings: "Students support and challenge each other through the literature circle discussions," says Moskal, but they need time to consolidate their thinking. After twenty minutes or so of discussion, she gives students time to write silently in their journals. Two of her favorite prompts:

- *What was the highlight of today's discussion? Explain in detail.*
- *Rate your group. Describe what you did best today. What does your group need to work on for next week?*

Moskal has found that narrative journaling at the end of each literature circle meeting works better than students talking about their impressions or filling out a rubric (these commonly focus on scoring a group on participation, mutual respect, communication skills, attention to the topic, and engaging in academic analysis).

At the end of each literature circle unit, Moskal gives students time to reflect on the book they've just finished and the process, perhaps writing a fan-fiction or creating a movie trailer for the book.

"'I'm Gonna Buy All These Books!': Reality Pedagogy and Literature Circles" by Nicole Moskal in *English Journal*, November 2019 (Vol. 109, #2, pp. 54-60), https://bit.ly/2FrZpCh; Moskal can be reached at nmoskal@schools.nyc.gov.

Back to page one

6. Young Adult and Nonfiction Books by African-American Authors

In this *School Library Journal* article (completing last week's lists), Desiree Thomas recommends recent books in two additional categories:

Young adult:

- *With the Fire on High* by Elizabeth Acevedo (HarperCollins/Harper Teen, 2019), grade 9 and up – An Afro-Latinx teen juggles multiple responsibilities and tries to find a better way forward.
- *Dream Country* by Shannon Dibney (Dutton, 2018), grade 9 and up – The gulf between the American dream and some immigrants' experiences.
- *Black Enough: Stories of Being Young and Black in America*, edited by Ibi Zoboi (HarperCollins/Balzer + Bray, 2019), grade 9 and up – A collection of short stories.

Nonfiction:

- *On the Other Side of Freedom: The Case for Hope* by DeRay McKesson (Viking, 2018), grade 9 and up – A former school administrator challenges all Americans to reaffirm a commitment to fight racism.
- *More Than Enough: Claiming Space for Who You Are (No Matter What They Say)* (Viking, 2019), grade 9 and up – An account of life as a black woman in the magazine industry.

"Black Is Beautiful: Reshaping the African-American Narrative" by Desiree Thomas in *School Library Journal*, December 2019 (Vol. 65, #11, pp. 60-61), no link available

Back to page one

7. Short Item:

U.S. immigration 1919-2019 – This animated graphic shows the countries from which U.S. immigrants came year by year: https://www.youtube.com/watch?v=GlJg2h2NrTM

"100 Years of Immigration to the U.S. 1919-2019" *Animated Stats*, December 20, 2019

Back to page one

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 other educators very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 50 years' experience as a teacher, principal, central office administrator, writer, and consultant 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). Every week there's a podcast and HTML version as well.

Subscriptions:

Individual subscriptions are $50 for a year. Rates decline steeply for multiple readers within the same organization. See the website for these rates and how to pay by check, credit card, or purchase order.

Website:

If you go to http://www.marshallmemo.com you will find detailed information on:

- How to subscribe or renew
- A detailed rationale for the Marshall Memo
- Publications (with a count of articles from each)
- Article selection criteria
- Topics (with a running count of articles)
- Headlines for all issues
- Reader opinions
- About Kim Marshall (bio, writings, consulting)
- A free sample issue

Subscribers have access to the Members' Area of the website, which has:

- The current issue (in Word and PDF)
- All back issues (Word and PDF) and podcasts
- An easily searchable archive of all articles so far
- The "classic" articles from all 14+ years

Core list of publications covered

Those read this week are underlined.

All Things PLC
American Educational Research Journal
American Educator
American Journal of Education
American School Board Journal
AMLE Magazine
ASCA School Counselor
District Management Journal
Ed. Magazine
Education Digest
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)
Kappa Delta Pi Record
Knowledge Quest
Language Arts
Literacy Today (formerly Reading Today)
Mathematics Teacher
Middle School Journal
Peabody Journal of Education
Phi Delta Kappan
Principal
Principal Leadership
Reading Research Quarterly
Responsive Classroom Newsletter
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Social Education
Social Studies and the Young Learner
Teachers College Record
Teaching Children Mathematics
Teaching Exceptional Children
The Atlantic
The Chronicle of Higher Education
The Education Gadfly
The Journal of the Learning Sciences
The Language Educator
The Learning Professional (formerly Journal of Staff Development)
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time Magazine