

Marshall Memo 568

A Weekly Round-up of Important Ideas and Research in K-12 Education
January 5, 2015

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Quotes of the Week

“Algebra is not inherently difficult, but it becomes hard to master if you have gaps in your understanding of exponents or decimals or negative numbers.”

Salman Khan (see item #1)

“Lectures can be OK sometimes, but most of the awesomeness of deep learning happens when teachers and students discuss and explore side by side.”

Salman Khan (*ibid.*)

“I feel like my teachers don’t ever talk to each other. Do they even know what I do when I’m not right in front of them?”

A high-school student, quoted in “Making the Most of Interdisciplinary Units of Study” by Nancy Frey and Douglas Fisher in *Principal Leadership*, January 2015 (Vol. 15, #5, p. 56-58), www.nassp.org; the authors can be reached at nfrey@mail.sdsu.edu and dfisher@mail.sdsu.edu.

“The emotional discomfort of confusion drives problem solving... ‘Desirable difficulties’... force students to engage with material and process information deeply. Teachers’ goals... should be to find ‘zones of optimal confusion.’”

Matthew Hutson in “Beyond Happiness: The Upside of Feeling Down” in *Psychology Today*, January/February 2015 (Vol. 48, #1, p. 44-53, 82), <http://bit.ly/1AsBY3x>

“Finnish schools identify problems and remediate early. We were told multiple times that 75 percent of [primary-grade] students have special services... They are much more proactive than reactive.”

G.A. Buie, NASSP president, visiting Finland’s schools, on why the need for special services declines as students progress; in “Trust Is Hallmark of Finnish Education System” in *NewsLeader*, January 2015 (Vol. 62, #5, p. 2), www.nassp.org

“Some students ask for help before they even start thinking about a problem, while others avoid seeking help even after struggling fruitlessly on their own. To get help successfully, a student has to understand that he or she has a problem, decide whether and whom to ask for help, do so clearly, and process the help that’s given.”

Sarah Sparks (see item #3)

1. Salman Khan on Classrooms of the Future

In this *Independent School* interview by Ari Pinkus, the founder of Khan Academy www.khanacademy.org describes how it evolved from a few brief math lessons for Nadia, his 12-year-old cousin in New Orleans, to a website with thousands of free online tutorials in history, civics, economics, finance, biology, chemistry, physics, astronomy, cosmology, computer science, health care, medicine, music, art history, and more – with 16 million registered users. Here are some of Khan’s thoughts on the future of K-12 teaching and learning:

- Khan is critical of what he calls the “Prussian model” of moving classes through the curriculum in lockstep. When a student gets a *C* on a math test and the class moves on, that student has some missing pieces for the next step in the curriculum, and over a period of years, those “Swiss cheese” holes accumulate, making success extremely challenging. “Algebra is not inherently difficult,” says Khan, “but it becomes hard to master if you have gaps in your understanding of exponents or decimals or negative numbers.”

- Khan believes that online lessons are particularly important in highly sequential subjects like math and science, where mastery of building blocks is essential to higher-level challenges – but his online tutorials in other subjects have also been warmly received.

- Khan’s brief lessons encourage students to master curriculum building blocks at their own pace and “take agency” for their learning. “The most important skill that anyone can learn is how to learn,” he says. “Students tend not to learn how to learn when they are forced-marched through a curriculum and focus only on what they are told to do next.” He envisions classrooms where students set their own learning goals, pace themselves, draw on help from peers and adults, and “pull knowledge their way rather than having it pushed onto them.”

- “I believe that what we now call ‘teenage angst’ is really nothing more than a hunger for responsibility and agency in a world where teens have very little,” says Khan. He believes adolescents will be much happier and more engaged if they are given opportunities to tutor and mentor younger students and contribute to society in meaningful ways.

- One of the most important outcomes of using online tutorials is to “Elevate the role of the teacher from lecturer to master mentor-coach-inspirer,” he says. “Lectures can be OK sometimes, but most of the awesomeness of deep learning happens when teachers and students discuss and explore side by side.” With a lot of basic curriculum content handled in online tutorials, teachers are liberated to work more closely and informally with students as they inquire, explore, cooperate, debate, and grow as learners.

- Khan believes schools should open large blocks of time in the schedule and get students deeply engaged in projects that are then developed into personal portfolios. These might be open-ended science inquiries, computer programs, or dance performances.

- Preparation for college success is one of the most social-class-determined areas of education, says Khan, with children of affluent and educated families having significant advantages. His partnership with the College Board aims to level the playing field by offering free online preparation for post-secondary learning.

- How is Nadia doing now? Ten years ago, says Khan, she was on her way into the slower math track and believed she was inherently not good at math. “Three years later, she was one of the youngest students in New Orleans to be taking calculus,” he says. “This was the first example of many that made me believe that a fixed mindset toward learning, coupled with accumulated gaps in foundations (as opposed to some kind of innate lack of ability), was the key reason why most students struggled in math.” Nadia recently graduated from Sarah Lawrence College and is thinking about going to medical school.

“Toward a One World Schoolhouse: Interview with Sal Khan” by Ari Pinkus in *Independent School*, Winter 2015 (Vol. 74, #2, p. 42-46), www.nais.org; see info@learningequality.org for information on Khan Academy Lite, geared to those without Internet access.

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2. Social-Class Differences in Student Assertiveness Asking for Help

In this article in *American Educator*, Jessica Calarco (Indiana University) reports on SES-based differences in student support-seeking in elementary classrooms. Her conclusion: children from middle-class families tend to actively seek help from teachers when they’re stumped, while children from working-class families generally try to manage learning problems on their own. “I found that they did so because of contrasting lessons they learned at home,” says Calarco, “with parents coaching them to adopt class-based understandings of the ‘appropriate’ way to problem solve.” Unless teachers are aware of these differences and compensate accordingly, middle-class children get more help and existing educational inequalities get worse.

What exactly do parents teach their children about how to deal with academic frustration? During three years observing classrooms and interviewing teachers, parents, and students in a suburban elementary school, Calarco found that working-class parents took a “no-excuses” approach. They encouraged their children to not bother their teachers, respect their authority, work hard, and deal with academic frustrations on their own. In interviews, says Calarco, parents “worried that teachers might perceive requests for help or clarification as disrespectful” – or even as a sign of laziness. This was true despite the fact that Calarco never once saw a teacher reprimand a student for seeking support. One working-class father said, “My kids know that you just do your best and try. I just want my kids to be respectful, responsible... I tell ’em to just get it done and not complain.” One day in a fifth-grade classroom, Calarco noticed that a boy from a working-class family was having great difficulty with a math problem. The teacher noticed his furrowed brow, walked over and asked if he

needed help, explained the problem, and moved on. The boy was still confused but he didn't ask for follow-up help and got the problem wrong.

Middle-class parents, on the other hand, explicitly encouraged a “by-any-means” approach, telling their children to be squeaky wheels and get the help they needed. Children “felt entitled to assistance from teachers and were very comfortable making requests,” says Calarco. “While shy and high-achieving children from middle-class families were sometimes nervous about speaking up or being perceived as ‘stupid,’ their parents’ persistent coaching helped to reassure these children that teachers would welcome their request and that the benefits would outweigh the risks.” One mother said, “I always tell them they should go up to the teacher and ask... They should get clarification, as opposed to making a bad decision or getting it wrong.” In the same fifth-grade classroom class described above, a middle-class student called the teacher over for help, got an explanation, still didn't understand, and pushed for more help until it made sense.

As a result of parental messages, says Calarco, children from middle-class families tended to complete their work more quickly and accurately than those from working-class families, compounding other class-based advantages with which they entered school.

This dynamic put the school's teachers in a bind. If they quite naturally responded to student requests that popped up, teachers' help would have a social-class skew, with more going to students from middle-class families. Calarco is at pains to say that teachers were not overtly biased against students from working-class families. “By no means do teachers intend to respond to students in different ways,” she says. “In many ways, it was clear they cared deeply about all their students and worried about those who, as one teacher noted, were not getting enough ‘support at home.’ But despite their good intentions, the structure of the school day and the pressures they faced made it hard for teachers to provide equal support to all their students... There simply was not enough time in the day to repeatedly check on each student and provide him or her with personalized support and assistance.” One teacher blurted out to her students, “I can't read minds. You have to let me know [if you are struggling].”

“Still,” Calarco concludes, “if educators are aware of their students' class-based patterns and possible misperceptions, they may be better equipped to help all their students succeed.” She noticed some of the teachers taking helpful steps such as:

- Walking around the room looking over students' shoulders as they worked and intervening where there were misunderstandings and struggles.
- Frequently saying, “Let me know if you have any questions” or “Come and see me up here if you need help.”
- A teacher noticing a worried face and asking, “You okay?” Students from working-class families were more comfortable asking for help when it was explicitly offered, since they knew they wouldn't be reprimanded for their requests.
- Teachers reassuring students that questions are okay, directions can't cover all situations, and confusion is normal.

But if teachers didn't make their expectations around giving support “extremely explicit,” says Calarco, “students were left to determine whether and how to make requests. Such decisions, in

turn, tended to exacerbate social-class differences in student help-seeking... It is important that teachers realize the power they have to prevent students' social-class backgrounds from determining who receives support in managing challenges at school.”

“Help-Seekers and Silent Strugglers: Student Problem-Solving in Elementary Classrooms” by Jessica Calarco in *American Educator*, Winter 2014-15 (Vol. 38, #4, p. 24-27, 30-13, 44), <http://www.aft.org/ae/winter2014-2015/calarco>; the author is at jcalarco@indiana.edu.

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3. More on Understanding Student Help-Seeking

In this *American Educator* article, Sarah Sparks reports on recent research on how students ask for help – specifically, what help-seeking behaviors reveal about students' perseverance, intellectual curiosity, and “growth” or “fixed” mindsets. “Some students ask for help before they even start thinking about a problem, while others avoid seeking help even after struggling fruitlessly on their own,” says Sparks. “To get help successfully, a student has to understand that he or she has a problem, decide whether and whom to ask for help, do so clearly, and process the help that’s given.”

“The term ‘help-seeking’ suggests a deficit, but we need students to think of this as managing resources to solve a problem,” says Stuart Karabenick of the University of Michigan. “You are always in the process of learning, and therefore you never know as much as you should. One has to learn the skills to acquire the knowledge you need.” However, as students move up to middle and high school, the social costs of looking stupid in front of peers and teachers tend to escalate. “Help-seeking is both academic and social in nature,” says Sarah Kiefer of the University of South Florida, “and adolescents are looking at their classrooms as an academic and social minefield.” This can lead students to get “expedient” help – copying a classmate’s homework (just to get it done) – rather than asking for help to really understand the work (which involves admitting that you don’t get it). “If you can take away the mindset that ‘I don’t want to look like a loser,’ and promote a growth mindset, that’s huge,” says Kiefer.

One study found that when teachers gave short answers in response to complex questions, students were less likely to ask for help over time. It can make a big difference if elementary teachers make very explicit the protocol for asking for help – when, how, and of whom. “Make it explicit, let them practice it,” says Karabenick. “It can be very, very effective to make it transparent that this is a normal part of learning.” One of the major skills teachers need to develop, he says, is spotting students who aren’t asking for help and figuring out which unspoken message is on a student’s mind:

- I’m afraid to ask.
- I don’t know how to ask.
- I don’t know what I don’t know.
- I don’t need help.

“[T]eachers by and large are not given any training in help-seeking,” says Karabenick, “and they may not be comfortable asking for help themselves.”

Sidney D’Mello of the University of Notre Dame has used facial-tracking cameras and seat sensors to gather data on students’ emotions and levels of attentiveness in classrooms. He has found that the way students who are attentive and “in the flow” lean forward in their seats is quite similar to that of students who are confused and frustrated, but there’s a subtle difference: with-it students lean forward more steeply, taking their backs off their chairs, whereas struggling students lean forward but keep their body posture more upright. Could there someday be software to tell teachers who needs help and who doesn’t?

The irony is that getting help all the time doesn’t produce better long-term achievement. There’s also a distinction between asking for detailed help on a problem and getting help building problem-solving skills. “I’m all for giving help,” says Ido Roll of the University of British Columbia, “but giving help is not telling you what to do. It’s giving resources to help you make sense of it yourself.” [See an article by Roll et al. on “desirable difficulties” in Marshall Memo 566, #7.]

“Studying the Ways Students Get Help with Classwork” by Sarah Sparks in *American Educator*, Winter 2014-15 (Vol. 38, #4, p. 28-29),
<http://www.aft.org/ae/winter2014-2015/sparks>

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4. What Should Schools and Parents Do About Teenage Sexting?

In this article in *The Atlantic*, Hanna Rosin reports on how a Virginia community dealt with the revelation that large numbers of middle- and high-school students were using their smartphones to send revealing photos to one another, some of which found their way into an Instagram account. Parents were up in arms, the police got involved, and a number of questions arose:

Is “total abstinence” the best position for parents and schools to take with teens on sexting? Do kids realize the possible college and career consequences of having compromising images online, not to mention the risk of adult stalkers getting involved – or is that message not credible? Should sexting be criminalized as child pornography, or should it be viewed as adolescent experimentation that deserves minor punishments and confiscation of offending phones? (“They’re not violent criminals,” said Dave Albo, chairman of Virginia’s Courts of Justice committee. “If these kids made a dumb-a-- mistake, we don’t want to ruin their future.”) Is sexting “virtual dating” in the new era, less harmful than actual contact? (“A way of being sexual without being sexual, you know?” said one girl).

And what leads boys to put such intense pressure on girlfriends and acquaintances to share photos, sometimes sending 30 texts in a row? Why do some girls not read the danger signs of a highly persistent boy whom they have little reason to trust? What is the difference between girls who stoutly resist pressure from boys to sext and those who succumb? Is the old double standard at work, with some girls suffering social opprobrium while boys got a free pass – and then openly disrespecting girls who sext? And what are boys *thinking* when they forward photos to others? Is this bullying on steroids?

Marsha Levick of the Juvenile Law Center has a suggestion: “We should draw the line between my daughter stupidly sending a photo of herself to her boyfriend and her boyfriend sending it to all his friends to humiliate her. The first is stupid. The second is more troubling and should be criminal.” But many parents don’t buy the stupid-but-harmless argument (the first part of Levick’s proposal). “I think this is coming from grown-ups who fear that their kids are doing things they don’t understand,” says Levick. “The technology is both hyper-visible and invisible, and parents are spooked by it. So kids are finding what’s a normal part of adolescent experimentation being criminalized.”

Interestingly, according to David Finkelhor of the Crimes Against Children Research Center, sex offenses against minors have declined significantly during the time-period in which sexting has become popular. Finkelhor speculates that the Internet and cellphone cameras have made it possible for teens to do their “risk taking” and “independence testing” online, which may reduce their exposure to actual violence and physical harm.

In cases involving minors, Rosin’s article concludes, the two polarities are clear. “Uploading another minor’s naked picture to the Web, where anyone might eventually find it, should be a criminal act, though not one that should necessarily be prosecuted as child porn. Taking a selfie and sending it to someone who might be receptive to it, or receiving a selfie and keeping it, should not be criminal at all... The nonconsensual sharing of pictures, even among just a few people, should probably count as a criminal act, as long as there is prosecutorial discretion. But even in these instances, the policing should, if possible, be left to teachers and parents, not to the actual police. Or in some cases to no one, because since when was any version of adolescent sexuality fair and free of pain?”

“Why Kids Sext” by Hanna Rosin in *The Atlantic*, November 2014 (p. 65-77),
<http://www.theatlantic.com/magazine/archive/2014/11/why-kids-sext/380798/>

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5. Short Items:

a. Top infographics of 2014 – This Brookings Institution link <http://brook.gs/1EIqbC0> shows ten information graphics, including happiness and age, lifetime earnings by college major, time parents spend with their children, and the cultural generation gap.

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b. International exchange website – This is the U.S. Department of State’s site for information on travel abroad <http://exchanges.state.gov>, with a rich array of information and strong encouragement for high-school students to expand their horizons through international travel.

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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 44 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 64 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).

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- A collection of "classic" articles from all 11 years

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/Public Education NewsBlast
Better: Evidence-Based Education
Center for Performance Assessment Newsletter
District Administration
Ed. Magazine
Education Digest
Education Gadfly
Education Next
Education Week
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Educational Horizons
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
Essential Teacher
Go Teach
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Harvard Educational Review
Independent School
Journal of Education for Students Placed At Risk (JESPAR)
Journal of Staff Development
Kappa Delta Pi Record
Knowledge Quest
Middle School Journal
Perspectives
Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Reading Today
Responsive Classroom Newsletter
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Teacher
Teachers College Record
Teaching Children Mathematics
Teaching Exceptional Children/Exceptional Children
The Atlantic
The Chronicle of Higher Education
The District Management Journal
The Journal of the Learning Sciences
The Language Educator
The Learning Principal/Learning System/Tools for Schools
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time
Wharton Leadership Digest