Marshall Memo 601

A Weekly Round-up of Important Ideas and Research in K-12 Education
August 31, 2015

In This Issue:

Quotes of the Week

"Anyone who has spent serious time within the U.S. public education system would likely agree that there are too many chefs in the school governance kitchen. Not only that, some of them are *terrible* cooks. Which means that great governance is scarce, consensus is hard to achieve, and significant change is rare."

Amber Northern and Chester Finn, Jr. in "Education Governance: Different Schools of Thought," *Education Gadfly*, August 26, 2015 (Vol. 15, #33), http://bit.ly/1EsNpwC

"[A]dolescents suffer from the cerebral equivalent of defective spark plugs."

Elizabeth Kolbert (see item #1)

"It makes sense to create thoughtful questions for students, but it's even more important to elicit their questions."

Alfie Kohn in "Who's Asking?" in *Educational Leadership*, September 2015 (Vol. 73, #1, p. 16-22), available for purchase at http://bit.ly/1hOYe2l

"Essential questions aren't a teaching move. Rather, they're a *design* move intended to make it more likely that the work and talk get beyond low-level coverage."

Grant Wiggins and Denise Wilbur (see item #2)

"Educators can't take math, turn it into Greek, and say, 'Mom, Dad, will you help your kid with this,' and not expect to get a 'Wha?'."

Harris Cooper (see item #6)

"A classroom routine is simply a well-rehearsed response to a teacher's directive. The alternative is usually noise, milling around, and time-wasting on the part of students and nagging on the part of the teacher. A classroom routine is, therefore, one of the teacher's primary labor-saving devices."

Fred Jones (see item #7)

1. Are Adolescents Hard-Wired to Be Crazy?

In this article in *The New Yorker*, Elizabeth Kolbert asks why adolescents take so many risks – for example, her three teens told her about a supposedly fun pastime known as a "case race" in which pairs of kids compete to see who can drink their way through a case of beer fastest (the preferred case size is a "thirty rack"). "And what goes for drinking games also goes for hooking up with strangers, jumping from high places into shallow pools, and steering a car with your knees," says Kolbert. "At moments of extreme exasperation, parents may think that there's something wrong with their teenagers' brains. Which, according to recent books on adolescence, there is… [A]dolescents suffer from the cerebral equivalent of defective spark plugs."

According to author/neurologist Frances Jensen, teens' frontal lobes aren't fully developed; that's the part of the brain that controls executive function – planning, self-awareness, and judgment – which acts as a check on impulses from other parts of the brain. The frontal lobes aren't fully myelinated until people are in their twenties, sometimes thirties, which leads Jensen to advise parents, "You need to be your teens' frontal lobes until their brains are fully wired." Of course teens' reaction to parental hectoring is predictable. When Kolbert told her teenage sons that she was thinking about calling the parents of their friends about safe-party protocols, one of them said, "Why even have kids if you're going to do that?"

Temple University psychologist Laurence Steinberg has a different explanation for adolescent behavior: the brain's *nucleus accumbens* – the pleasure center – reaches its maximum size and sensitivity during the teen years. In addition, as puberty arrives, kids' brains sprout more dopamine receptors, making them more sensitive to enjoyment. According to Steinberg, "Nothing – whether it's being with your friends, having sex, licking an ice-cream cone, zipping along in a convertible on a warm summer evening, hearing your favorite music – will ever feel as good as it did when you were a teenager." This, he believes, is why adolescents do so many crazy things and why the mortality rate of 15-19-year-olds (mostly from accidents) is nearly twice that of children 1-4 and three times that of kids 5-14. "The notion that adolescents take risks because they don't know any better is ludicrous," says Steinberg. Rather, it's that the potential psychic and physical rewards are much, much greater. Adolescent risk-taking is also more prevalent when there are other teens around. A teen driving a car with peers is four times more likely to get in an accident as when driving alone. And, Steinberg adds, "the recklessness-enhancing effect of being around peers is strongest when adolescents actually know there is a high probability of something bad happening." This is also

why the age-crime graph looks like the Matterhorn, rising steeply during the teens, peaking at eighteen, and falling after that. Some psychologists have used this as an argument against imposing life sentences on teens who commit violent crimes – they probably will outgrow their criminal tendencies.

Why are teens' brains wired this way? Scientists believe that as humans emerged from primate ancestors millions of years ago, there was an evolutionary payoff for adolescents to venture outside their natal group for mates. "The reward for taking chances in dangerous terrain was sex followed by reproduction," explains Kolbert, "while the cost of sensibly staying at home was genetic oblivion." Teen brains are still wired the same way, but "Many recent innovations – cars, Ecstasy, iPhones, S.U.V.s, thirty racks, semi-automatic weapons – exacerbate the mismatch between teen-agers' brains and their environment. Adolescents today face temptations that teens of earlier eras… couldn't have dreamed of. In a sense, they live in a world in which all the water bottles are spiked. And so, as Jensen and Steinberg observe, they run into trouble time and time again."

Kolbert's twin 16-year-olds spent part of their summer taking 30 hours of required driver's ed classes. This "completely misses the point," she says. "Sixteen-year-olds are dangerous drivers. Their rate of fatal crashes per mile is three times as high as the rate for drivers age twenty and over, and nearly twice as high as the rate for drivers eighteen and nineteen. Sixteen-year-olds will still be a hazard after listening (or, more likely, not listening) to thirty hours' worth of cautionary tales. They actually do understand that driving is dangerous; the problem is that they're having too much fun to care. The only way to bring down their accident rate is to prevent them from getting behind the wheel." She and Steinberg agree that the age for getting a license should be eighteen. The same logic applies to educational programs to prevent smoking, doing drugs, and problem drinking. The billions of dollars spent on these efforts make very little difference, says Kolbert. It would be better to spend the money on sports and arts programs to keep kids busy and under adult supervision.

Thinking about her boys, Kolbert concludes, "Yes, adolescents in the twenty-first century pose a great risk to others and, statistically speaking, an even greater risk to themselves. But this is largely because other terrifying risks – scarlet fever, diphtheria, starvation, smallpox, plague – have receded. Adolescence evolved over a vast expanse of time when survival at any age was a crapshoot. If the hazards are new, so, too, is the safety. Which is why I will keep telling my kids scary stories and why they will continue to ignore them."

"The Terrible Teens" by Elizabeth Kolbert in *The New Yorker*, August 31, 2015,
http://www.newyorker.com/magazine/2015/08/31/the-terrible-teens

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2. Improving the Quality of Essential Questions

(Originally titled "How to Make Your Questions Essential")

In this *Educational Leadership* article, Grant Wiggins and Denise Wilbur suggest ways to fine-tune Essential Questions so they will:

- Spark discussion and debate;
- Demand evidence and reasoning because there's no right answer;
- Stimulate ongoing thinking and inquiry;
- Suggest multiple, arguable answers;
- Raise further questions;
- Recur throughout the unit or year;
- Point to the unit's big ideas.

"Getting the questions right takes discipline, skill, and artfulness," say Wiggins and Wilbur. "But it's well worth the effort to ensure that students tackle inquiries that are important, intriguing, and revealing… High-level inquiries and questioning yield some of the greatest gains possible on conventional tests of achievement, as well as better student engagement." Their suggestions:

• *Use the checklist above*. Compare draft questions to see if they stack up. For example, *How do good readers use strategies to understand a text?* might become, *Which strategy should I use when I don't understand what I'm reading?*

• *Rephrase convergent or factual questions to invite inquiry and argument*. For example, the question, *What were the three major causes of World War I?* could be tweaked to read, *How important was World War I in shaping the modern world?* Other helpful stems:

- *To what extent… ?*
- *In what contexts… ?*
- *How important was… ?*
- *What's the value of… ?*
- *When should we… ?*
- *When shouldn't we… ?*

Another first attempt, *What is proper punctuation, and why is it important?* could be improved to read, *When is proper punctuation mandatory, and when is it optional?*

• *Shape questions that lead to big ideas*. "The best essential questions are, literally, of the essence," say Wiggins and Wilbur. They aren't just intriguing – they lead to the core understandings. For example, *Where in the world do we find examples of similar triangles?* could be revised to read, *How much and in what ways would we most miss similar figures if they didn't exist?*

• *Stretch questions beyond the curriculum unit*. For example, *How do Frog and Toad act like friends?* could become, *Who is a true friend?* "We want a question that rewards us for revisiting it," say Wiggins and Wilbur. Another example: *Why did we fight in Vietnam, and was it worth it?* could be stretched to, *Why have we gone to war? When was it wise, and when was it foolish?*

• *Avoid leading students to predictable, mundane, superficial answers*. Explore likely misconceptions. Some first-draft questions: *What's the difference between fiction and nonfiction? What can numbers help us do?* Better questions: *When is fiction revealing, and when is it a lie? What can't the language of numbers communicate? Why does a thrown ball move the way it does?*

• *Jot and then polish*. "Don't try to write and edit simultaneously," advise Wiggins and Wilbur. "Draft a bunch of questions first, *then* edit. The more versions you draft, the easier the editing will be."

• *Keep your eye on the broader goals of instruction*. "Essential questions aren't a teaching move," say the authors. "Rather, they're a *design* move intended to make it more likely that the work and talk get beyond low-level coverage." This question is too content-focused: *When do we use mean, median, and mode?* A better formulation: *What's the fairest way to calculate grades? What are the strengths and weaknesses of each measure of tendency? When are measures of central tendency most abused, and how can we defend against such abuses?*

"How to Make Your Questions Essential" by Grant Wiggins and Denise Wilbur in *Educational Leadership*, September 2015 (Vol. 73, #1, p. 10-15), http://bit.ly/1Jx67SJ; Wilbur can be reached at denisewilbur@gmail.com.
Grant Wiggins died in May as the article above was going into production. Here is a video of him talking about character and formative assessment, which his colleague Jay McTighe and his widow Denise Wilbur believe captures his essence: https://vimeo.com/98347339

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3. The Power of Student-Generated Questions

(Originally titled "Let's Switch Questioning Around")

"We are kidding ourselves if we think our questions alone turn students into critical thinkers," says Cris Tovani (Commerce City, Colorado English teacher and author) in this *Educational Leadership* article. "Instead of spending time honing our questioning skills, it's time we help students hone theirs. Giving students opportunities to practice questioning will help them way beyond the classroom. People who wonder set a purpose for themselves. They know asking questions will propel them to continue reading and learning… Asking questions gives learners control."

Teachers fire off as many as 120 questions an hour, and by middle school, many students have become expert question-answerers – and perhaps teacher mind-readers. The problem is that with many of these questions, teachers are looking for a single right answer, which leaves little room for original thought. Getting students asking their own questions changes this dynamic. "It's a lot harder to fake an authentic question than it is to copy an answer from some Internet site," says Tovani. Here are some strategies she recommends:

- Using students' questions to drive the next day's reading and small-group conversations. "Students' questions provide a great deal of invaluable formative assessment data that helps me adjust instruction," she says.
- Cruising around the classroom as students read and jot questions on their "think sheets," checking in with individual students and collecting the papers of those she didn't have time to talk with.

- Being selective about which student questions she'll answer. She responds to *Who, What, When,* and *Where* questions, but when students ask *How* or *Why* questions, she'll respond with another question, for example, *Why do you think that's happening?*
- Sharing a text she's been reading and annotating to show the questions she's asking as she reads and explaining that some questions deserve more effort than others.

"I'm humbled by my students' questions," says Tovani. "Often they are better than mine." They definitely help her differentiate instruction. "If students were all answering the same teacher-generated question, I wouldn't be able to tell who got it and who copied."

Of course Tovani does ask her own questions of students, and she's noticed that they fall into two categories:

Questions that create awareness:

- What are you wondering about the book?
- What are you noticing about how the author is using time? Jumping forward, flashing back, chronological? What purpose do you think it serves?
- What background knowledge do you have about the book, topic, author, or characters?
- Did you notice the title? Any ideas on how it connects to the piece?
- What weird or unusual text structures are you noticing? Why do you think the author structured the chapter that way?
- What predictions are you making?
- What questions do you have? Which ones do you care about most?
- Which character's perspective are you connecting to most?
- Are there any objects or colors that keep popping up?
- How could you look at this information differently?

Open-ended questions that inform instruction:

- Why do you think that?
- What do you need?
- Is this boring or are you stuck? Why? What have you done before to get unstuck?
- Have you tried what we talked about in the mini-lesson?
- What's preventing you from working? What causes you to stop?
- What might you try tomorrow?
- What do you know now that you didn't know before?
- What's going on in your head as you read? What is your inner voice saying?

"Let's Switch Questioning Around" by Cris Tovani in *Educational Leadership*, September 2015 (Vol. 73, #1, p. 30-35), available for purchase at http://bit.ly/1PHdPLP; Tovani can be reached at ctovani@hotmail.com.

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4. Can Multiple-Choice Questions Be Instructionally Useful?

(Originally titled "Making the Most of Multiple Choice")

In this *Educational Leadership* article, consultant/author Susan Brookhart argues that multiple-choice test questions, often denigrated as measuring only superficial knowledge and

skills, actually have some important advantages:

- They don't require students to do a lot of writing or speaking, which allows teachers to assess the thinking skills of students with limited language proficiency.
- Because multiple-choice items are shorter than open-response questions, it's possible to test students on a much broader range of material in a given period of time.
- Well-written multiple-choice items can measure higher-order thinking skills such as analysis and interpretation.
- If incorrect answer choices are all plausible and written to include common errors and misconceptions, test results can give teachers insights into what's confusing and frustrating their students.

Brookhart believes that "context-dependent" multiple-choice questions can be particularly helpful – that is, questions accompanied by visual or written material. "Because students have the material in front of them," she says, "their mental energy can be devoted to thinking about the material, not striving to retrieve it from memory." She gives three examples of this type of question:

• *Interpreting a map, graph, table, photo, or other visual* – The questions on a graph, for example, might challenge students to interpret data, draw conclusions, and practice inductive scientific reasoning.

• *Interpreting a text, story, or scenario* – A well-framed multiple-choice question on a speech by Jefferson Davis can assess students' powers of interpretation and kick off a class debate on the views and intentions of Southern leaders before the Civil War.

• *Critiquing the work of fictional characters* – The teacher could create a fictional scenario – for example, one person says combining ingredients to make a cake is a physical change while another contends that it's a chemical change – and then ask who is correct, getting students to defend their reasoning, and following up with key teaching points.

And multiple-choice questions aren't just for tests, says Brookhart. Here are two uses in regular classroom time:

• Checking the whole class's understanding with an all-class response system – By getting students to respond to well-framed questions using clickers, Internet-based systems (like Poll Everywhere), Plickers, holding up A B C D cards, or using hand signals, teachers can quickly gauge the level of mastery of every student and follow up with a "convince your neighbor" activity or an all-class discussion in which students justify their answers or explain why wrong answers are incorrect.

• Open-ended explanations or extensions – Students might be asked to read a passage from the Declaration of Independence, respond to a multiple-choice question asking which of four summaries best captures the main idea, and then explain how they decided which summary was correct. This approach assesses students' ability to analyze content information and practice their metacognitive skills.

"A basic point underlying all these methods is that selecting means making a decision, and making a decision means thinking," says Brookhart. "What we must do is get better at writing multiple-choice questions that require students to think deeply."

"Making the Most of Multiple Choice" by Susan Brookhart in *Educational Leadership*, September 2015 (Vol. 73, #1, p. 36-39), available for purchase at http://bit.ly/1hsydVy; Brookhart can be reached at susanbrookhart@bresnan.net.

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5. Measurement versus Assessment: The Role of Human Judgment

In this article in *Education Week*, James Nehring (University of Massachusetts/Lowell) addresses what he calls the fundamental problem with accountability testing: it's trying to eliminate the human element. The underlying belief, he says, is that "Human judgment is a contaminant, so it's best to bleach it out and replace it with clean, pure, multiple-choice… Let the data drive decisions."

But if we're trying to use assessment to improve teaching and learning, says Nehring, human judgment is essential. Assessment *for learning* is a "less precise enterprise involving evidence, intelligence, conversation, and judgment," he contends. "As long as policy, in the era of accountability, relies chiefly on *measurement*, our schools have little incentive or pressure to teach for range or depth. Instead, we teach decontextualized, discrete skills, unsuited to most tasks offered up by the real worlds of work, citizenship, or personal life." He is critical of the PARCC and Smarter Balanced tests, which he says offer a "pathetic conceit" – a wholly inadequate attempt to shift objective measurement toward helpful assessment.

Instead, says Nehring, we need to build an authentic and useful system that honors human judgment and provides classroom teachers with the kinds of data they can use to continuously improve student learning. That's the way our legal system works, he says: "The jurors are provided with all the evidence and the best arguments on all sides, but the decision, ultimately, lies with them… Measures inform, but people, in the end, make an *assessment*." The parallel in education, being implemented in some schools, is teams of teachers assessing portfolios of student work using rubrics keyed to standards. "Students present in juried exhibitions," says Nehring. "Peer review ensures trustworthiness through schoolwide audits."

True, this kind of assessment doesn't provide simple numerical scoring that some policymakers want, but there are plenty of other areas that lend themselves to objective metrics, among them student attendance, graduation rates, school climate, parent satisfaction, resource allocation. "When it comes to learning, however, it is wise to remember the maxim *not everything that counts can be counted*," says Nehring. "Yes, assessment is flawed. Human judgment is imperfect. Juries make bad decisions. But I'll sooner entrust a group of informed, vetted, and thoughtful school teachers with my child's educational future than Pearson or PISA or the Educational Testing Service."

"To Measure, or to *Assess*, Learning? Human Judgment Is Not the Problem, It's the Solution" by James Nehring in *Education Week*, August 26, 2015 (Vol. 35, #2, p. 19-20), www.edweek.org; Nehring can be reached at James_Nehring@uml.edu.

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6. Math Anxiety Is Contagious!

In this *New York Times* article, Jan Hoffman reports on a study in *Psychological Science* of how parents' math anxiety is picked up by their first and second graders, pulling down the kids' school achievement in math (but not in reading). The means of transmission? Parents helping their children with math homework. The study found that the more math-phobic parents helped, the worse their children did, slipping more than a third of a grade level behind classmates and becoming math-anxious themselves. "The parents are not out to sabotage their kids," says Sian Beilock, one of the authors of the University of Chicago study. "But they have to ensure their input is productive. They need to have awareness of their own math anxiety and that what they say is important… Saying, 'I'm not a math person either, and that's O.K.' is not a good message to convey."

How does math anxiety work in the brain? According to Mark Ashcraft of the University of Nevada/Las Vegas, "On challenging math problems that require a lot of working memory, math-anxious people fall apart." Their working memory is tied up with worries "and they don't have enough left over to do the math." The anxiety most often kicks in when students encounter middle-school algebra, but it can begin earlier, especially for girls who have math-anxious female elementary school teachers.

One thing that increases parental math anxiety is the introduction of new math curriculum materials that take an approach to basic operations that's radically different from what they learned in school. "Educators can't take math, turn it into Greek, and say, 'Mom, Dad, will you help your kid with this,' and not expect to get a 'Wha?'", says Harris Cooper of Duke University. An Idaho mother went on Facebook to complain about how Common Core math standards were driving her to drink. "I've taken to labeling math homework by how many glasses of wine it takes to peel myself off the ceiling after I'm done," she said. "That was a two-glasser after whatever it is we're calling long division."

What can white-knuckle math parents do to reduce the negative effect they're having? One approach is to create a math-positive environment and model "math behavior," says Cooper. "You have your math homework, and I have mine" – counting change, calculating when dinner will be ready, and looking at prices in the supermarket. Another approach is to tag-team with a more math-confident spouse. And then there's consulting with the teacher, looking over curriculum manuals, and actually mastering the math.

"Generations of Math Fears" by Jan Hoffman in *The New York Times*, August 25, 2015, http://nyti.ms/1Evsrxn; the study described in this article, "Intergenerational Effects of Parents' Math Anxiety on Children's Math Achievement and Anxiety" by Erin Maloney, Gerardo Ramirez, Elizabeth Gunderson, Susan Levine, and Sian Beilock in *Psychological Science*, August 7, 2015, is available for purchase at http://bit.ly/1KyDk2g.

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7. Fred Jones on Establishing Classroom Routines Up Front

"A classroom routine," says classroom management guru Fred Jones in this *Tools for Teaching* website article, "is simply a well-rehearsed response to a teacher's directive. The

alternative is usually noise, milling around, and time-wasting on the part of students and nagging on the part of the teacher. A classroom routine is, therefore, one of the teacher's primary labor-saving devices." Jones contends that the time spent establishing routines in the first two weeks of school eliminates huge amounts of wasted time from that point on.

But firmly establishing routines takes time and determination. "They cannot simply be announced," says Jones. "They must be taught and practiced." Here's how a fourth-grade teacher worked with her students on walking silently from their classroom to the library:

- She explains how noise in the halls prevents other classes from learning.
- She establishes several silent signals: A finger to her lips for silence; a signal for a straight line; gestures to stop and start moving and to stop, go back, and start all over.
- The class lines up and files down the hallway toward the library.
- A student in the line giggles and the teacher turns, gives the *Go back* signal, and the class, with some disgruntled faces, shuffles back to the classroom and lines up to try again. "Some show disbelief for a moment before they realize that you are not kidding," says Jones. "Keeping a straight face is the hardest part of this routine."
- The second time, the class makes it two-thirds of the way to the library, but someone talks and the teacher once again gives the *Go back* signal. "This time you see real pain on the faces of students," says Jones. "Several students mouth the words, 'I didn't do it,' with pleading hands and looks of exaggerated sincerity. Keep a straight face."
- The third time, the class is almost at the library door when someone messes up and students once again return to their classroom. "The pain registered on faces the third time around is almost too much to bear," says Jones. "Bite your lip. Old pros know that this is the only way to play the game. Green teachers need to be reassured that they are doing the right thing. By practicing the routine to mastery, you are signaling to the students by your investment of time and energy that this piece of behavior is important. And, you are teaching the students a thing or two about yourself. They are learning that you are the living embodiment of two timeless characterizations of a teacher: *I say what I mean and I mean what I say. We are going to keep doing this until we get it right*."
- The fourth time around, a transformation takes place. The class clowns and nonconformists, instead of getting reinforced for their behavior, get glares from their peers. The majority of students "start losing patience," says Jones. "They are tired of trekking up and down the stupid hall. When they finally lose patience with this repeated practice, they also lose patience with the few who are causing them to do it." The class learns that "Quiet means quiet" and makes it all the way to the library.

"Research has repeatedly shown that highly effective teachers spend most of the first two weeks of the semester teaching their classroom routines," concludes Jones. "They know that there is no free lunch. It is a case of: *Pay me now, or pay me later. Do it right, or do it all year long*." And this is true right up through high school, he says.

"Succeeding with Classroom Structure: Rules, Routines, and Standards" by Fred Jones in *Tools for Schools*, August 25, 2015, http://bit.ly/1ieNdHy

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8. McTighe and Wiggins on What Can Go Wrong with Unit Plans

In this booklet published by ASCD and Arias, backwards design gurus Jay McTighe and Grant Wiggins address 25 common problems with curriculum units (the booklet provides detailed suggestions):

Problems with unit goals:

- Overly activity-oriented
- Oriented toward coverage
- Oriented to test prep
- Targeting too many standards
- Lacking understanding-based goals
- Unit goals not clearly related
- Shallow essential questions
- Not distinguishing means versus ends
- Not distinguishing knowledge and skill objectives

Problems with assessment evidence:

- Not enough or inappropriate evidence for unit goals
- Insufficient evidence of learning to ensure reliable assessment
- Contrived and inauthentic performance tasks
- Performance assessment tasks not worth the effort
- Performance tasks or projects don't yield valid evidence for individual students
- Invalid evaluation criteria or rubrics

Problems with the learning plan:

- Doesn't address the targeted understandings and essential questions
- No pre-assessments
- Doesn't anticipate and check for possible or predictable misconceptions
- Lacks ongoing formative assessments
- Doesn't include time for needed adjustments
- The learning sequence is too linear and likely to bore or confuse students
- Doesn't adequately prepare students to transfer their learning
- Insufficient differentiation
- Doesn't increase student autonomy and transfer of learning
- Not aligned with the goals and/or assessments

Solving 25 Problems in Unit Design by Jay McTighe and Grant Wiggins, ASCD/Arias, 2015, available for purchase at http://bit.ly/1PHKuka

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9. Short Items:

a. A Mindset Kit – This free set of online lessons from Stanford University's PERTS research center introduces students to the power of the "growth" mindset and describes what teachers and parents can do to help students embrace it. The kit has separate courses for

teachers, parents, and teaching teams or leaders who want to bring growth-mindset thinking to their schools. It also has a 75-minute course for math classrooms. https://www.mindsetkit.org

Spotted in "Rules for Engagement: Mindset Kit Aims to Put Research on Growth Mindset, Engagement to Work" by Evie Blad in *Education Week*, August 20, 2015

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b. Question stems at different Bloom's levels – TeachThought has created this site www.teachthought.com/learning/25-question-stems-framed-around-blooms-taxonomy to provide teachers ideas on effective questions in different subject areas.

"Doubletake: Online Only" in *Educational Leadership*, September 2015 (Vol. 73, #1, p. 8)

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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 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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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
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Principal Leadership
Principal's Research Review
Reading Research Quarterly
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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 Magazine
Wharton Leadership Digest