# Marshall Memo 431

A Weekly Round-up of Important Ideas and Research in K-12 Education April 9, 2012

#### In This Issue:

- 1. A critique of discovery/inquiry/constructivist/problem-based teaching
- 2. Ten principles of effective instruction
- 3. <u>Douglas Reeves on the "buy-in" myth</u>
- 4. Minuses and pluses in a California parent outreach program
- 5. Replacing round-robin reading with effective practices
- 6. A prize-winning playwright whose stage is now a Georgia classroom
- 7. Children's books with a global theme
- 8. Ideas for fine-tuning summer reading programs
- 9. Helping elementary students grapple with real-world data
- 10. Short items: (a) Combating underage drinking; (b) Google jockeying;
  - (c) Middle-level chemistry

# **Quotes of the Week**

"If you think you have buy-in, then chances are very high that you are not asking for a very significant change."

Douglas Reeves (see item #3)

"Only when leaders can say, 'The evidence has persuaded me to change my previous practices and beliefs,' can they expect teachers also to change, improve, and, most importantly, challenge our students to do the same."

Douglas Reeves (ibid.)

"Learning requires the construction of knowledge. Withholding information from students does not facilitate the construction of knowledge."

Richard Clark, Paul Kirschner, and John Sweller (see item #1)

"Who's on top and who's on the bottom, who gets what and who decides – the 12-year-old mind thinks of nothing else."

Margaret Edson, Atlanta middle-school social studies teacher (see item #6)

"Sitting by yourself, forcing the swirl of thoughts into a linear, systematic journey forward – it makes you smarter. It's like a pastry bag, literacy is. It presses you into one clear line."

Margaret Edson (*ibid*.)

### 1. A Critique of Discovery/Inquiry/Constructivist/Problem-Based Teaching

In this intriguing *American Educator* article, Richard Clark (University of Southern California), Paul Kirschner (Open University of the Netherlands), and John Sweller (University of New South Wales) ask whether people learn best when they have to discover or construct essential information, or when they are given full, explicit instruction. "Our goal in this article is to put an end to this debate," say the authors. "Decades of research clearly demonstrate that *for novices* (comprising virtually all students), direct, explicit instruction is more effective and more efficient than partial guidance."

The authors aren't advocating that teachers lecture all day. Explicit instruction can take many forms, they say: lectures, modeling, videos, computer-based presentations, and realistic demonstrations with ample practice and feedback, as well as class discussions and activities and small-group and independent problems and projects as a means of practicing recently learned content and skills.

Why do the authors believe the direct approach is better than allowing students to try different approaches to solving a new math problem (for example) and debating which works best? First, research comparing the two approaches supports direct instruction; second, research on how people learn does too.

• Research comparing fully guided and partially-guided instruction — "Controlled experiments almost uniformly indicate that when dealing with novel information... students should be explicitly shown what to do and how to do it, and then have an opportunity to practice doing it while receiving corrective feedback," say Clark, Kirschner, and Sweller. Here's what tends to happen in discovery/inquiry classrooms: (a) only the highest-achieving and best-prepared students make the discovery; (b) many students become frustrated, disengage, or copy what the eager beavers are doing; (c) some students "discover" an incorrect solution and cling to it even after being told the correct answer; (d) even if all students find the correct answer through discovery, it takes two or three times longer than direct instruction with practice and feedback; and (e) indirect instruction widens the achievement gap because better-prepared students learn much more from inquiry learning than less-prepared students.

What has led so many educators to believe that discovery teaching works is the constructivist teaching fallacy. "Simply put," say the authors, "cognitive activity can happen with or without behavioral activity, and behavioral activity does not in any way guarantee cognitive activity. In fact, the type of active cognitive processing that students need to engage in to 'construct' knowledge can happen through reading a book, listening to a lecture, watching

a teacher conduct an experiment while simultaneously describing what he or she is doing, etc. Learning requires the construction of knowledge. Withholding information from students does not facilitate the construction of knowledge."

Curiously, if given a choice, lower-performing students prefer discovery learning and higher-performing students prefer explicit instruction – in both cases, they're picking the approach that does them the least good!

• Research on how people learn – Recent studies have established the key role of long-term memory in how well we function in cognitively based activities – everything from crossing the street in traffic to solving math problems. Chess masters are able to play several games at once because they have memorized thousands of board configurations and remember the best moves in each situation. Long-term memory is the ultimate aim of teaching: "Everything we see, hear, and think about is dependent on and influenced by our long-term memory," say the authors. "If nothing has been added to long-term memory, nothing has been learned."

Working memory, on the other hand, is a limited mental "space" in which conscious processing occurs – in other words, in which we think. "The relations between working and long-term memory, in conjunction with the cognitive processes that support learning, are of critical importance to developing effective instruction," say Clark, Kirschner, and Sweller. Short-term memory can hold only about seven items at a time, only two or three can be processed simultaneously, and almost all the information stored there is lost within 30 seconds.

"The limitations of working memory only apply to new, to-be-learned information," say the authors. "When dealing with previously learned, organized information stored in long-term memory, these limitations disappear." There are no known limits to how much information can be brought into working memory from long-term memory.

"These two facts – that working memory is very limited when dealing with novel information, but that it is not limited when dealing with organized information stored in long-term memory – explain why partially or minimally guided instruction typically is ineffective for novices," say the authors, "but can be effective for experts. When given a problem to solve, novices' only resource is their very constrained working memory. But experts have both their working memory and all the relevant knowledge and skill stored in long-term memory."

One of the best examples of instruction that takes advantage of these insights is the "worked example" approach – a problem that has already been worked out is explained step by step. Numerous studies in math, science, English literature, and world history classrooms have shown that this approach is most effective with novice learners because it reduces the overload on working memory and allows students to stay on top of the problem-solving process. Most important, it allows students to direct working-memory resources toward storing the essential problem-solving steps in long-term memory. "Students learn to recognize which moves are required for particular problems," say the authors, "which is the basis for developing knowledge and skill as a problem solver."

For experts, on the other hand, the worked-example approach is redundant and ineffective. For them, solving a problem is more effective because they can retrieve problem-

3

solving steps from long-term memory. The authors call this the "expertise reversal effect" – simply put, "instructional effects that are highly effective for inexperienced learners can lose their effectiveness and even have negative consequences when used with more experienced learners."

"Putting Students on the Path to Learning: The Case for Fully Guided Instruction" by Richard Clark, Paul Kirschner, and John Sweller in *American Educator*, Spring 2012 (Vol. 36, #1, p. 6-11), <a href="http://www.aft.org/pdfs/americaneducator/spring2012/Clark.pdf">http://www.aft.org/pdfs/americaneducator/spring2012/Clark.pdf</a>

Back to page one

### 2. Ten Principles of Effective Instruction

In this *American Educator* article, University of Chicago/Urbana-Champaign emeritus professor Barak Rosenshine lists ten principles of classroom instruction based on research in cognitive science, research on the classroom practices of highly effective teachers, and research on cognitive supports to help students learn complex tasks.

- Begin a lesson with a short review of previous learning. Daily review can strengthen previous learning and can lead to fluent recall.
- Present new material in small steps with student practice after each step. Teach only small amounts of new material at any time, and then help students as they work with this material.
- Ask a large number of questions and check the responses of all students. Questions help students practice new information and connect new material to their prior learning.
- *Provide models*. Providing students with models and worked examples can help them learn to solve problems faster.
- *Guide student practice*. Successful teachers spend more time guiding students' practice of new material.
- *Check for student understanding*. Monitoring student learning at each point can help them grasp the material with fewer errors.
- Get a high success rate. It is important for students to be operating at a level of proficiency before the teacher moves on.
- *Provide scaffolds for difficult tasks*. The teacher gives students with temporary supports to help them when they learn difficult tasks.
- Require and monitor independent practice. Students need extensive, successful, independent practice in order for skills and knowledge to become automatic.
- Engage students in weekly and monthly review. Students need to come back to learned material to develop well-connected and automatic knowledge.

"Principles of Instruction: Research-Based Strategies That All Teachers Should Know" by Barak Rosenshine in *American Educator*, Spring 2012 (Vol. 36, #1, p. 12-19, 39), http://www.aft.org/pdfs/americaneducator/spring2012/Rosenshine.pdf

Back to page one

#### 3. Douglas Reeves on the "Buy-In" Myth

In this thoughtful *American School Board Journal* article, author/consultant Douglas Reeves challenges the widespread notion that "buy-in" from all stakeholders is a prerequisite for important change. "What community members need are leaders and policymakers who will listen and also challenge us," says Reeves. "Don't ask us to buy into your ideas for change; challenge us to envision a future that is better than today. Challenge us to consider improvements in our educational systems that will happen only if we replace the skepticism associated with the buy-in imperative with the hope and optimism associated with new ideas, practices, and policies." Reeves suggests four ways to get past the buy-in fallacy:

- Behavior precedes belief. The conventional wisdom is that we must change people's attitudes before they will change their behavior. A good deal of professional development is based on this model hence the myriad motivational speakers touring the country. But cognitive psychology has a better way to help people quit smoking, lose weight, become less authoritarian as leaders, and lecture less in the classroom. "Changes of this magnitude happen not because of belief, but despite belief," says Reeves. "...It is not rhetoric that persuades us, but evidence at a personal level. The addict, lecturer, or autocrat reinforces new behavior only after observing evidence that the new behavior is effective." That means going cold turkey on cigarettes, getting on a treadmill, trying participatory leadership practices, and experimenting with interactive models in the classroom in other words, acting our way into a new way of believing rather than believing our way into a new way of acting.
- Buy-in is an illusion. "If you think you have buy-in, then chances are very high that you are not asking for a very significant change," says Reeves. "Significant changes in professional practices represent painful losses and an acknowledgement that past practices were not as effective as we thought." People may be acquiescing to a new enthusiasm from administrators in the cynical (or realistic) belief that this too shall pass.
- Evidence beats rhetoric. Policymakers and school leaders need to push back against popular practices that harm students, says Reeves: "The most toxic policies mandatory retention, corporal punishment, and mathematically indefensible grading policies are enshrined in statutes and board policies not because leaders are venal but because our culture elevates the opinions of the loud and many over the evidence of the quiet and few." He cites encouraging evidence of policies that have changed by the weight of the evidence, not because there was a democratic vote: no smoking in faculty lounges, bans on corporal punishment in most states, and a gradual move away from demonstrably ineffective classroom practices.
- "I used to think...But now I think..." Reeves loves the challenge that Harvard professor Richard Elmore gives scholars (his book with this title lists a number of views that have changed over the years). Reeves concludes: "Only when leaders can say, 'The evidence has persuaded me to change my previous practices and beliefs,' can they expect teachers also to change, improve, and, most importantly, challenge our students to do the same."

"Envision a Better Future" by Douglas Reeves in *American School Board Journal*, May 2012 (Vol. 199, #5, p. 42, 44), no e-link available; Reeves is at dreeves@leadandlearn.com.

Back to page one

#### 4. Minuses and Pluses in a California Parent Outreach Program

In this *Teachers College Record* article, Susan Auerbach and Shartriya Collier of California State University/Northbridge report on their case study of the Families Promoting Success program. Four Los Angeles elementary schools used it to improve student test scores and help get out of Program Improvement status.

The bad news: this well-intentioned program was not successful in raising student achievement. Why? Because the program was narrowly test-driven, dealt with decontextualized word-analysis skills, and didn't consider parents' needs and concerns. "This finding was not surprising in light of the program's limited scope (word analysis skills), relatively short duration, uneven attendance, and timing 1 or 2 months before the test," say Auerbach and Collier. "As a literacy coach noted in an interview, improving achievement is a long-term process, not the 'quick fix' that the district wanted." Parents who wanted help getting their children reading and understanding what they read did not get their needs met, nor did parents with second-language issues.

For example, at one point early in the program parents were given Open Court assessment reports on their children's achievement. Parents responded to the data charts with confusion and tears. "Don't worry, that's why we're here – to give you help and materials so your child can move up," said school officials. The program "took a school-to-home transmission approach to parent involvement," say Auerbach and Collier, "that privileged the school agenda and positioned families as deficient in time, interest, or skills to help their children. Staff missed an opportunity for a relational approach to parent involvement in which educators listen to parent voice, share power, and seek out common ground for action."

Auerbach and Collier compare the school's agenda with the parents' agenda:

- School: Raising test scores, getting off Program Improvement status, informing parents about high-stakes tests, and teaching parents skills in the Open Court program.
- Parents: Motivating their children, helping them focus, improving reading comprehension, English language learning, and finding out how they were doing.
- The overlap: Tools to help at home; making learning fun; and raising parent awareness.

The good news: the Families Promoting Success had some unanticipated benefits. It raised parents' awareness of school expectations, strengthened home-school ties, introduced school literacy strategies to parents, strengthened parent-child bonds (especially playing word games), and raised parents' confidence that they could help their children at home. One mother said that after the program, she asked her daughter a better post-reading question: "What did you understand from what you read?"

Auerbach and Collier conclude with seven recommendations for urban schools considering outreach programs for Latino immigrant families:

- Build a school culture that values relationships and invites parents to participate in joint responsibility for student learning.
- Meet parents where they are, introducing them to the school, the curriculum, and each other "in a warm, welcoming, interactive way."

- Begin with an approach that promotes a love of reading and provides tips for families on reading together in Spanish or English.
- Reach out to parents in surveys, focus groups, and meetings to find their needs and concerns.
- Make sure the skills and concepts in the program are accessible to Spanish-dominant families.
- Personalize instruction to build relationships among families and between families and school staff. Presenters should be able to share personal stories and connect to families.
- Take the long view and build a program that stretches through the years and builds a culture of collaboration and skillful assistance to students.

"Bringing High Stakes from the Classroom to the Parent Center: Lessons from an Intervention Program for Immigrant Families" by Susan Auerbach and Shartriya Collier in *Teachers College Record*, March 2012 (Vol. 114, # 3, p. 1-40), no e-link available

Back to page one

# 5. Replacing Round-Robin Reading with Better Practices

In this *Reading Today* article, Radford University (VA) professors Katherine Hilden and Jennifer Jones report that over half of K-8 teachers use round-robin reading in some form – students take turns reading aloud to the whole class (without prior practice) while other students follow along. Why does this discredited practice continue in so many classrooms?

- It's a way to get all students paying attention to the same material at the same time.
- It appears to keep students engaged especially if students are called on to read in random order (Popcorn or Popsicle Reading) or if each reader can decide who will read next (Combat Reading).
- It helps with classroom management everyone is quiet except the designated reader.
- It allows the teacher to evaluate students' fluency.
- It requires little preparation by the teacher.

But there is no research evidence that round-robin reading improves students' reading fluency or comprehension. Here's why:

- A slower classroom pace Oral reading takes much more time to cover the same material as silent reading, which slows the pace of instruction.
- Less practice Students read less when they are reading one at a time 1/20<sup>th</sup> of the time in a class of 20 students and are subvocalizing with the reader, which is not good practice for quicker silent reading.
- Off-task behaviors Students who are not reading are often not paying attention, especially if the teacher has a predictable pattern for calling on students. Some students may try to figure out which passage they will read and practice it to improve their performance, which means they aren't following along with the current reader.
- *Poor modeling* Listening to peers who read slowly, with many halting stutters and mistakes, is not a good way to develop fluent reading.

- *Problems with comprehension* Passively listening to a peer reading doesn't encourage active meaning-making among other students, especially if they're not paying attention.
- *Problems with self-efficacy and motivation* Struggling readers can feel humiliated when their weaknesses are on display to classmates, and being publicly corrected makes things worse. In Combat Reading, some students may actually bully weaker classmates by calling on them to read.

What are the alternatives to round-robin reading? Hilden and Jones suggest the following:

- *Timed repeated reading* A student listens to a fluent reader read a short passage that is at the instructional reading level (90-95% accuracy). The student then practices reading the passage silently. Then the student reads the passage aloud as quickly as possible while maintaining appropriate expression. Another student or the teacher records mistakes and keeps time, and they graph speed and mistakes. This is done regularly and each student keeps track of his or her own progress.
- *Readers theatre* A group of students rehearses reading a dramatic script, each practicing his or her lines over the course of a week, then performing for classmates. Props and costumes aren't necessary the plot and emotion must be conveyed through expressive reading.
- Fluency-oriented reading instruction (FORI) Through a weekly cycle of teacher modeling, echo reading, choral reading, and partner reading, FORI helps students build fluency, confidence, and comprehension with grade-level textbooks, literature anthologies, and trade books.
- *Peer-assisted learning strategies* (PALS) Proficient and less-proficient students are paired and take turns being the coach and the reader, cycling through reading, re-reading, retelling, summarizing, predicting, and asking questions.
- "A Literacy Spring Cleaning: Sweeping Round Robin Reading Out of Your Classroom" by Katherine Hilden and Jennifer Jones in *Reading Today*, April/May 2012 (Vo. 29, #5, p. 23-24); the authors can be reached at <a href="mailto:kclouse@radford.edu">kclouse@radford.edu</a> and <a href="mailto:jjones292@radford.edu">jjones292@radford.edu</a>...

Back to page one

# 6. A Prize-Winning Playwright Whose Stage Is Now a Georgia Classroom

In this *New York Times* article, Charles McGrath reports on the career trajectory of Margaret Edson, who won the 1999 Pulitzer Prize for her play, "Wit" (which is currently on Broadway starring Cynthia Nixon) and now teaches sixth-grade social studies in an Atlanta middle school. "Except for the eyes in the back of her head, which miss nothing – not even secret fiddling with a broken zipper – Ms. Edson is the kind of teacher who makes you wish you could go back and repeat middle school," writes McGrath. "In a commencement address she gave at Smith College in 2008 she called teaching a 'physical, breath-based event, eye to eye,' which is another way of saying it's a performance... She mugs, does voices, makes big arm gestures and frequently pauses for dramatic effect."

The central character in "Wit" is a teacher, yet Edson hadn't taught when she wrote the play in 1991. She drew on her experience as a unit clerk on a cancer floor in a Washington research hospital, which gave her insights on the character's struggle with cancer. "It was the lowest job in the entire hospital," says Edson. "It was like being a stage manager in a play, keeping track of the supply cabinet, the patients' schedules. That was a very weighty time. I don't mean heavy. It was just very meaningful to me. I loved that job. I felt so useful."

Edson taught kindergarten for several years, and then switched to sixth-grade social studies and relished the challenge of getting up to speed. "I don't know when I was ever so avid for learning," she says, "but it was for an ignoble motive: I didn't want to embarrass myself." Social studies is a perfect match for middle-school kids, she believes, because it answers one of their central questions: "Who's on top and who's on the bottom, who gets what and who decides – the 12-year-old mind thinks of nothing else."

Edson has been called the Harper Lee of playwrights – one spectacular success and no further output. Why doesn't she write another play? "There was just something I wanted to say and the play seemed like the best way to say it," she explains. "But the contribution I want to make now I want to make in the classroom. The difference between teaching and playwriting is not incomprehensible to me, they're not so different. They both create a public event that leads to understanding."

Edson pours all her energy into teaching. For her, summers are a time to do nothing, which she believes makes her a more interesting person in the classroom. Writing on the side is too distracting, she says: "The presence of fictional characters in your head, especially ones who talk, is extremely preoccupying. And the nonfictional characters in my life are abundant."

But Edson uses writing constantly in her classroom. Most classes end with students silently summing up the main idea of the class on paper. "Sitting by yourself, forcing the swirl of thoughts into a linear, systematic journey forward – it makes you smarter," she tells her students. "It's like a pastry bag, literacy is. It presses you into one clear line."

"Changing Gears But Retaining Dramatic Effect" by Charles McGrath in *The New York Times*, Feb. 19, 2012, http://nyti.ms/IfD7ha

Back to page one

#### 7. Children's Books with a Global Theme

In this *Reading Today* feature, Karen Hildebrand shares quick reviews of several children's books that won awards from Notable Books for a Global Society:

- *Alicia Alonso*, *Prima Ballerina* by Carmen Bernier-Grand (Marshall Cavendish) The story of Cuba's prima ballerina told in free-verse poetry in a picture-book format.
- Better Than Weird by Anna Kerz (Orca) A twelve-year-old boy who is on the autism spectrum looks forward to a visit from his absent father while dealing with a bully in his class.
- *Migrant* by Maxine Trottier (Groundwood) Told from a child's point of view, this is the story of a group of Low-German-speaking Mennonites who migrate from Canada to Mexico in the 1920's.

- *Now Is the Time for Running* by Michael Williams (Little, Brown) Set in modern-day Zimbabwe, this book is about a 14-year-old boy and his mentally disabled older brother who flee their village after a vicious attack by soldiers.
- Which Side Are You On? The Story of a Song by George Ella Lyon (Cinco Punto Press) This book tells the story of the 1931 Harlan County (KY) coal miner strike and a protest song written by a union supporter. You can hear the actual song sung by Florence Reece at <a href="http://www.youtube.com/watch?v=Nzudto-FA5Y">http://www.youtube.com/watch?v=Nzudto-FA5Y</a>.
- The No. 1 Car Spotter by Atinuke (Kane-Miller) Set in rural Africa, this is the story of a boy and his grandfather, who become expert at identifying cars and save the day when trouble strikes.
- *Promise the Night* by Michaela MacColl (Chronicle) Set in colonial Kenya in 1910, this is the story of the female aviator and adventurer, Beryl Markham.

"Notable Books for a Global Society: 2012 Selections Announced" by Karen Hildebrand in *Reading Today*, April/May 2012 (Vol. 29, #5, p. 40-41)

Back to page one

#### **8. Ideas for Fine-Tuning Summer Reading Programs**

In this *Education Week* article, Hannah Rose Sacks summarizes a new federal study showing that giving books to disadvantaged elementary-school students over the summer is not enough to improve their reading comprehension. The study measured the pre- and post-comprehension levels of 1,571 third and fourth graders who received eight books appropriate to their reading levels and interests and postcard reminders over the summer. The students read slightly more over the summer than a control group, but made no gains in comprehension. "The lack of improvement in the fall led the authors to suggest that other factors, such as personalized teacher encouragement, may be key to summer book programs," says Sacks.

"Report Roundup: Summer Reading" in *Education Week*, Apr. 4, 2012; the full study, "Does a Summer Reading Program Based on Lexiles Affect Reading Comprehension", can be downloaded at: <a href="http://www.edweek.org/ew/articles/2012/04/04/27report-3.h31.html">http://www.edweek.org/ew/articles/2012/04/04/27report-3.h31.html</a>
<a href="mailto:back to page one">Back to page one</a>

# 9. Helping Elementary Students Grapple with Real-World Data

In this article in *Teaching Children Mathematics*, Rick Hudson and a team of Indiana researchers suggest using hands-on activities and TinkerPlots, a data analysis software package designed for grades 4-8, to solve real-world data problems. Here's one of them:

Three teachers gave the same quiz to their classes. Here are the scores:

Teacher A: 4, 5, 5, 5, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 8, 8, 8, 8, 9, 9, 9, 10

Teacher B: 1, 2, 3, 5, 5, 5, 6, 6, 6, 7, 7, 7, 7, 8, 8, 8, 9, 9, 9, 10, 10, 10, 10, 10

Teacher C: 2, 2, 3, 3, 3, 4, 5, 6, 6, 7, 7, 7, 7, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 10, 10

As a statistician, what would you tell the teachers about their students' performance on the quiz?

"Learning to Tinker" by Rick Hudson, Dionne Cross, Mi Yeon Lee, and Lauren Rapacki in *Teaching Children Mathematics*, April 2012 (Vol. 18, #8, p. 508-513); <a href="http://bit.ly/HsOK9w">http://bit.ly/HsOK9w</a> Hudson can be reached at <a href="mailto:rhudson@usi.edu">rhudson@usi.edu</a>.

Back to page one

#### 10. Short Items:

- *a. Combating underage drinking* Mothers Against Drunk Driving (MADD) has designated April 21<sup>st</sup> as PowerTalk21, a national day for parents and teens to talk about underage drinking. Here are some statistics to start the conversation:
  - 3 in 10 eighth graders have tried alcohol.
  - 1 in 5 teens engage in binge drinking
  - Only 1 in 100 parents believes his or her own child engages in binge drinking.
  - Teen alcohol use kills about 6,000 people each year, more than all other illegal drugs combined.

For more information, see <a href="http://www.madd.org/underage-drinking/powertalk-21">http://www.madd.org/underage-drinking/powertalk-21</a>.

MADD is also sponsoring a video contest for teens, deadline April 27th. For rules, entry forms, and instructions, see <a href="http://www.madd.org/youthvideo">http://www.madd.org/youthvideo</a>.

"Bulletin Board" in *Principal Leadership*, April 2012 (Vol. 12, #8, p. 7)

Back to page one

**b.** Google jockeying – This is when a student is designated to use the Internet to answer questions and find more information during a class. To learn more, see 7 Things You Should Know About Google Jockeying at http://net.educause.edu/ir/library/pdf/ELI7014.pdf.

"Bulletin Board" in *Principal Leadership*, April 2012 (Vol. 12, #8, p. 6)

Back to page one

*c. Middle Level Chemistry* – This website from the American Chemical Society has 43 lessons in six categories: molecules, changes in state, density, the periodic table, water, and chemical reactions: <a href="http://www.middleschoolchemistry.com/lessonplans">http://www.middleschoolchemistry.com/lessonplans</a>. Each lesson has multimedia components and lab guidelines.

"Bulletin Board" in *Principal Leadership*, April 2012 (Vol. 12, #8, p. 7)

Back to page one

© Copyright 2012 Marshall Memo LLC

#### Do you have feedback? Is anything missing?

If you have comments or suggestions, if you saw an article or web item in the last week that you think should have been summarized, or if you would like to suggest additional publications that should be covered by the Marshall Memo, please e-mail: kim.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 43 years' experience as a teacher, principal, central office administrator, and writer, lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 44 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides elinks to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are about 50 issues a year).

### Subscriptions:

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

#### Website:

If you go to <a href="http://www.marshallmemo.com">http://www.marshallmemo.com</a> 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 count of articles from each)
- Headlines for all issues
- What readers say
- About Kim Marshall (including links to articles)
- A free sample issue

Marshall Memo subscribers have access to the Members' Area of the website, which has:

- The current issue (in PDF or Word format)
- All back issues (also in PDF or Word)
- A database of all articles to date, searchable by topic, title, author, source, level, etc.
- How to change access e-mail or log-in

#### Publications covered

Those read this week are underlined.

American Educator

American Journal of Education

American School Board Journal

ASCD, CEC SmartBriefs, Daily EdNews

Better Evidence-Based Education

Ed. Magazine

**EDge** 

**Education Digest** 

**Education Gadfly** 

**Education Next** 

**Education Week** 

**Educational Leadership** 

**Educational Researcher** 

**Elementary School Journal** 

Essential Teacher (TESOL)

Harvard Business Review

Harvard Education Letter

Harvard Educational Review

**JESPAR** 

Journal of Staff Development

Kappa Delta Pi Record

Language Learner (NABE)

Middle Ground

Middle School Journal

New York Times

Newsweek

PEN Weekly NewsBlast

Phi Delta Kappan

Principal

Principal Leadership

Principal's Research Review

Reading Research Quarterly

Reading Today

Rethinking Schools

Review of Educational Research

Teachers College Record

**Teaching Children Mathematics** 

The Atlantic Monthly

The Chronicle of Higher Education

The Language Educator

The New Yorker

The Reading Teacher

The School Administrator

Theory Into Practice