Marshall Memo 437

A Weekly Round-up of Important Ideas and Research in K-12 Education
May 21, 2012

In This Issue:

Quotes of the Week

"Simply put, the brain can't be in two places at once."
Sarah Sparks (see item #1)

"Given the science, the idea of starting high schools later is a no-brainer… Aligning start times with student body clocks decreases dropout rates, truancy, moodiness, car crashes, depression, and related medication needs, and it improves school performance and increases the amount of sleep students get per night."
Terra Ziporyn Snider (see item #2)

"[W]hat's the point of an integrated school with segregated classrooms?"
Michael Petrilli (see item #3)

"The most inspirational speech I was given consisted of two words: Good luck."
Robyn Jackson on her induction as a new teacher in "How to Think Like a Master Teacher" in *Educational Leadership*, May 2012 (Vol. 69, #8, http://bit.ly/IpwDAU)

"Teacher preparation institutions need to transform their programs to reflect the realities of the 21st century."
Gary Chesley and Janice Jordan (see item #4)

"Don't babble."
Gary Rubinstein's tenth piece of advice to new teachers (see item #5)

1. Research on Adolescent Multitasking

In this *Education Week* article, Sarah Sparks reports on research indicating that many 13-18 year-olds, afraid they'll miss out on something important, use as many as six types of technology simultaneously. They pay "continuous partial attention" to lots of stuff and have difficulty concentrating deeply on anything, says Larry Rosen of California State University/ Dominguez Hills, author of *iDisorder: Understanding Our Obsession with Technology and Overcoming Its Hold on Us* (Palgrave Macmillan, 2012).

Rosen and others shared insights on how the human brain copes with multitasking at a recent Web-Connected Minds Conference. "Simply put, the brain can't be in two places at once," reports Sparks, citing research by Steven Yantis of Johns Hopkins University. "Not only can people not process two tasks simultaneously, but it takes longer to multitask than it would to do the individual tasks one after the other… It's fine to walk and chew gum at the same time, but when a person tries to do two things at the same time that each require a choice, there's a brief 'bottleneck' in the prefrontal cortex – the decision-making part of the brain – that delays the second task. In most situations, that delay is only milliseconds long. Yet the newer the task, the more dynamic the environment, and the more intense the distraction, the longer it will take the brain to react. In the case of an adolescent driver… texting could slow reaction time by a full second, which at high speed is 'halfway into the trunk of the car in front of you.'"

Whether they're in classrooms or studying at home, multitasking students miss important information or don't fully take it in, are more easily distracted, and perform worse on memory and attention tests than those who do one thing at a time. "There appears to be an intrinsic, structural aspect of brain function that prevents perfect task-sharing," says Yantis. If a student is reading a textbook chapter and is interrupted by a text message, getting back into the chapter takes longer than one would imagine. "Part of this switch time is remembering what you were reading, getting your head back into the task of reading, not just moving your eyes," he says.

These delays are even more pronounced with students with attention deficit hyperactivity disorder. "It's ironic, but hyperactive children are slow," says Martha Denckla of Johns Hopkins. "Multiple-task interference is greater in children with ADHD; it costs them more. As they have to respond, evaluate, and move along, they have a harder time doing it."

But aren't young people better at multitasking than adults? Their working memory is slightly more efficient, says psychologist Daniel Willingham of the University of Virginia/

Charlottesville, and they're more adept at using technology. But, he says, "There's not much reason to think they are better at multitasking than previous generations." And there's the judgment that comes with maturity – knowing when to stop multitasking and pay attention. Experienced adult drivers take their eyes off their cell phone as they approach a traffic light and have fewer accidents and near misses than teen drivers, who find it more difficult to look up from a text message. "Working memory depends strongly on how well you can control selective attention and ignore distractions," says Yantis. "High-value distraction significantly slows performance."

Some teens are better than others at restraining themselves from multitasking when it's not appropriate. Larry Rosen did an experiment in which honors-level college students were asked to watch a video lecture on which they knew they would be tested. Researchers then texted some of the students on unrelated topics and asked for "prompt" responses. Those who were interrupted by texts scored ten percentage points worse on the test – a full letter grade – than those who received no texts. And of those who were texted, prompt responders did significantly worse on the test than those who held off responding for five or more minutes. This parallels the finding of the classic "marshmallow" experiment, in which young children who had the self-control to restrain themselves from eating a treat for 15 minutes were found to do better academically and socially in subsequent years.

Is the answer to take away adolescents' cell phones and computers? Absolutely not, say Rosen and author Cathy Davidson. Multitasking is an important skill for adult life. What educators and parents need to do is help young people develop a metacognitive sense to know when multitasking is unhelpful and unsafe – and the self-control to pull themselves away from their beloved cell phones and computers when it's time to focus on one thing.

"New Research on Multitasking Points to Role of Self-Control" by Sarah Sparks in *Education Week*, May 16, 2012 (Vol. 31, #31, p. 1, 13), http://bit.ly/J0t2WD

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2. Later School Hours for Sleep-Deprived Teens

"Given the science, the idea of starting high schools later is a no-brainer," says medical writer Terra Ziporyn Snider in this compelling *Education Week* article. "Waking before sunrise means teens must be asleep by about 8:30 p.m. to get the approximately nine hours of sleep per night their growing brains and bodies require. Even disregarding homework, extracurriculars, and electronics, physiologic changes mean most adolescents can't fall asleep before 11 p.m. Shifted circadian rhythms make 7 a.m. in teens (and younger teachers) equivalent to 4 a.m. in their parents."

The research and common sense are compelling, says Snider, citing a 2011 Centers for Disease Control and Prevention study that found 70 percent of U.S. teens are sleep-deprived and 40 percent are getting six or fewer hours of sleep on school nights. "Today," she says, "you'd be hard-pressed to find a health professional, sleep scientist, or educator who would defend starting high schools in the 7 a.m. hour, now the norm for many U.S. high schools, as good for physical or mental health, safety, or learning… Aligning start times with student body

clocks decreases dropout rates, truancy, moodiness, car crashes, depression, and related medication needs, and it improves school performance and increases the amount of sleep students get per night." One study found that for disadvantaged students, early start times had the same effect as having a highly ineffective teacher. There's the additional safety issue that students in early-starting schools are done by 2:00 p.m. and have hours of unsupervised afternoon time to get into trouble.

Even with all this evidence, many communities resist changing their early-start times. Those who have gone to later hours – including Wilton (CT), Edina and Minneapolis (MN), and Palo Alto (CA) – have found that people quickly learn to deal with it. "Concerns about the impact on sports, jobs, day care, and so forth turn out to be groundless," says Snider. "Everything in the community adjusts to the new school times, just as when schools or families change start times for other reasons."

But Snider acknowledges that it's hard for local school boards to stand up to community resistance that always mobilizes when the possibility of a later start time is raised. A more powerful message from outside is required to support local action. "We must start regarding 7 a.m. start times as just as unacceptable as refusing to heat schools when the temperature drops or as exposing children to secondhand smoke," she says. "This may take federal, state, and/or local laws or regulations to ensure safe, healthy school hours for all students, in much the same way that federal regulations already restrict times school lunch can be served."

"Later School Start Times Are a Public-Health Issue" by Terra Ziporyn Snider in *Education Week*, May 16, 2012 (Vol. 31, #31, p. 25), http://bit.ly/JhPusw

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3. Thoughts on Racial and Economic Integration in Schools and Classrooms

In this *Education Gadfly* article, Michael Petrilli knits together several important demographic and pedagogical themes that have been in the news recently:

• For the first time, reported *The New York Times* last week, nonwhites account for more than half of U.S. births. Given our schools' less-than-stellar record educating children of color, wonders Petrilli, what does this augur for the future?

• America has been unsuccessful at decreasing racial isolation in schools. According to UCLA's Civil Rights Project, the average black and Latino student attends a school that is 75% nonwhite, and 80% of white students (who make up half the school-age population) attend schools that are majority white.

• A long *New York Times* article on Sunday, May 13, described how students in a Brooklyn charter school feel about going to school with no white classmates. "It's a bit weird," said one student. "All my friends are predominantly black, and all the teachers are predominantly white. I think white kids go to different schools. I don't know. I haven't seen many white people in a big space before."

• Researchers continue to find that attending racially and economically integrated classes produces better life outcomes for poor and minority children.

• The rapid gentrification of many U.S. cities is making school integration more feasible.

• It's also possible that charter schools will use recruitment to produce more voluntary integration across race and class lines.

• Truly diverse schools have daunting instructional challenges if they group students heterogeneously in every classroom, says Petrilli: "[C]lasses that are racially and socio-economically diverse are likely to have especially large achievement gaps between their high and low performers – creating a nearly impossible instructional task for mere mortals."

• The temptation is for schools to group students in separate classrooms by achievement – but this runs the risk of re-segregating students by race and class – "And what's the point of an integrated school with segregated classrooms?" asks Petrilli.

• Differentiated instruction is supposed to make it possible to teach students with a range of achievement levels in the same classroom. But if the gaps are too large, that's difficult. The most difficult challenge is a bimodal distribution of achievement – very high and very low-performing students with few in the middle.

• Petrilli suggests that the solution might be grouping students for reading and math and teaching them in heterogeneous groups for science, social studies, art, music, and physical education.

"The Dilemma of Academic Diversity" by Michael Petrilli in *The Education Gadfly*, May 17, 2012 (Vol. 12, #10), http://bit.ly/Kx9exP

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4. What To Look for in a New Teacher

(Originally titled "What's Missing From Teacher Prep")

In this *Educational Leadership* article, Connecticut educators Gary Chesley and Janice Jordan bemoan the fact that many new teachers are unprepared to succeed in the classroom. "Teacher preparation institutions need to transform their programs to reflect the realities of the 21st century," they say. From focus-group interviews with a number of new teachers, Chesley and Jordan compiled a list of ways university programs could improve. This list could also be used by principals as selection criteria when hiring new teachers.

• *Understanding what's required of a professional* – Teachers need to be prepared for the physical and mental demands of classroom teaching and know the importance of reaching out and collaborating with colleagues and reflecting on what's working and what isn't.

• *Knowing how to teach content* – Teachers need to be up to date on Common Core expectations, know how to teach reading (at all grade levels), and be adept at using formative assessments to check for student understanding and develop alternative approaches when students don't get it the first time.

• *Knowing classroom management* – New teachers must be able to hit the ground running with clear expectations and routines and adept handling of student misbehavior.

• *Knowing how to plan units and lessons* – Teachers need solid training in big-picture curriculum planning and creating effective daily lesson plans.

• *Knowing how to engage students* – This includes motivation, differentiation, cooperative grouping, and tapping into students' background knowledge and life experiences.

• *Knowing how to integrate technology* – Teachers need to be adept at using computer hardware and software to find information on the Internet, organize and present new learning, and communicate with families.

• *Knowing how to use data* – Teachers need to be able to use summative, interim, and on-the-spot assessments to monitor student progress and plan instruction – and devise non-traditional assessments that go beyond paper-and-pencil tests.

• *Knowing how to work with special-needs students* – Teachers must be prepared to differentiate effectively for students with a wide range of disabilities.

"What's Missing from Teacher Prep" by Gary Chesley and Janice Jordan in *Educational Leadership*, May 2012 (Vol. 69, #8, p. 41-45), http://www.ascd.org; the authors can be reached at chesleyg@bethel.k12.ct.us and jordanj@bethel.k12.ct.us.

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5. Ten Pieces of Advice for Rookie Teachers

(Originally titled "The Don'ts and Don'ts of Teaching")

In this *Educational Leadership* article, New York City high-school teacher Gary Rubinstein lists the mistakes he wishes he'd been warned not to make in his rookie year:

• *Don't try to teach too much in a day*. Teachers are exhorted to have high expectations, and there's always the fear of running out of activities. "But the risks of over-packing a class period are too high," says Rubinstein. "Better to split a lesson originally planned for one day into a two-day affair."

• *Don't teach a lesson without a student activity*. "When a lesson has no activity, students get restless and tune out," he says. When planning, think up the activity first, and get to it as soon as possible in the lesson.

• *Don't send kids to the office*. "When you send kids out, it soon becomes the only thing they'll respond to," says Rubinstein. Work to improve instruction and discipline in the classroom.

• *Don't allow students to shout out answers*. What may feel like a lively discussion is really a few kids speaking up and the others tuning out because they're not aggressive enough to get their ideas heard. Expert teachers pose thought-provoking questions and call on students who raise their hands – or cold-call.

• *Don't make tests too hard*. This leads students to perform poorly and conclude that you haven't taught the material well, neither of which is helpful.

• *Don't be indecisive*. This conveys uncertainty and weakness to students. Rubinstein advises giving clear, firm answers to students' questions within three seconds. If you get it wrong, reverse it the next day: "I thought that, now I think this. Let's move on."

• *Don't tell a student you're calling home*. "Calling home is one of the best things you can do to respond to student misbehavior, but it must always be a surprise," says Rubinstein. Advance warning can lead students to escalate to show they don't care, gives them a chance to

get to the parent first, and can make you look weak if for some reason you are unable to reach the parent.

• *Don't try to be a buddy*. "I suggest you mark on the calendar a random day, some day in February, to be the first time you carefully cross the buddy line for a short visit before turning back," says Rubinstein.

• *Don't dress too casually*. "If you look like a teacher, they will treat you like a teacher," he says.

• *Don't babble*. It's a sign of nervousness. "The more words you say, the less value each word has," says Rubinstein. "Choose your words carefully."

"The Don'ts and Don'ts of Teaching" by Gary Rubinstein in *Educational Leadership*, May 2012 (Vol. 69, #8, p. 50-52), http://bit.ly/KuVzCE; the author is at garyrubinstein@yahoo.com.

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6. Robert Marzano on How to Build Students' Self-Efficacy

(Originally titled "Teaching Self-Efficacy with Personal Projects")

In this *Educational Leadership* article, Robert Marzano says the best way to help students enhance their self-efficacy is by walking them through these questions on a personal project:

• *What do I want to accomplish?* One female high-school student wrote, "I want to go to the U.S. Air Force Academy and eventually fly military jets."

• *Who else has accomplished the same goal? Who will support me?* This student might identify Nicole Malachowski, the first woman in the elite Thunderbirds, and enlist her own parents as mentors.

• *What skills and resources will I need?* To enter the Academy, students need a high GPA, a letter of recommendation from a U.S. senator or representative, and physical fitness.

• *What will I have to change about myself?* It's important to identify personal weaknesses that might impede progress and decide how to deal with them.

• *What is my plan for achieving my goal, and how hard will it be?* These are concrete, realistic short- and long-term stepping-stones.

• *What small steps can I take right now?* The Air Force-aspiring student might set a two-month goal of being able to run a mile in under eight minutes.

• *How have I been doing, and what have I learned about myself?* The student who wants to fly jets might feel proud that she's on track – or might decide she wants to aim for a ground-based military career. "Such changes in direction are a natural consequence of exercising self-efficacy and are also to be celebrated," says Marzano.

"Teaching Self-Efficacy with Personal Projects" by Robert Marzano in *Educational Leadership*, May 2012 (Vol. 69, #8, p. 86-87),

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7. Reading Comprehension: Ten Principles

In this article in *The Reading Teacher*, University of Pennsylvania/East Stroudsburg professor Maureen McLaughlin lays out the goal of reading instruction – "teaching students to become active, strategic readers who successfully comprehend text" – and presents ten principles of reading comprehension she believes every teacher should know:

• *Principle #1: Comprehension is the active construction of meaning as the reader makes connections between prior knowledge and the text.*

• *Principle #2: Most of what we know about comprehension comes from studying good readers.* They work at making sense of what they are reading, have clear goals, ask themselves questions as they read, monitor their progress, have a repertoire of strategies, problem-solve and "fix up" when they aren't understanding, discover new information on their own, think about their thinking, and read widely in a variety of texts.

• *Principle #3: It's all about good teaching.* Effective teachers believe all children can learn; differentiate instruction using a variety of techniques and groupings; understand that students learn best in authentic situations; orchestrate print-rich, concept-rich environments; have in-depth knowledge of reading, writing, speaking, and listening; provide lots of opportunities for students to read, write, and discuss; draw on insights gained from good readers; and constantly use assessment evidence to fine-tune instruction.

• *Principle #4: Motivation is a key factor.* Effective teachers make students want to read by creating the right environment, making compelling texts available, and instilling intrinsic motivation.

• *Principle #5: Explicitly teaching a variety of reading comprehension strategies builds students' reasoning power.* These include previewing, self-questioning, making connections, visualizing, knowing how words work, monitoring (*Does this make sense?*), summarizing, and evaluating.

• *Principle #6: Vocabulary development is essential.* It is fostered by building students' interest in learning and using new words, developing precision in word use, getting students actively involved in the process, studying how words work, exposing students to new words multiple times, and extending vocabulary development to other subject areas.

• *Principle #7: Students should read a variety of types and levels of text.* These should include instructional-level books for teacher-guided lessons and easier texts for independent reading. Motivation and achievement increase when students read texts that interest them.

• *Principle #8: Students should use multiple modes to represent their thinking.* Oral and written responses are fine, but students should also be able to sketch, dramatize, sing, and create projects about their reading.

• *Principle #9: Constantly check for understanding.* Teachers should observe students as they read and discuss, look at their informal written responses, and use other assessments – and use insights gained to follow up and fine-tune instruction.

• *Principle #10: Push students to comprehend at deeper levels.* Students need to go beyond passively accepting a text's message and read between and beyond the lines, thinking about the author's purpose and the underlying message of the text. "Critical literacy focuses on

the problem and its complexity," says McLaughlin. "It addresses issues of power and promotes reflection, action, and transformation."

"Reading Comprehension: What Every Teacher Needs to Know" by Maureen McLaughlin in *The Reading Teacher*, April 2012 (Vol. 65, #7, p. 432-440), http://www.reading.org; the author can be reached at mmclaughlin@esu.edu.

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8. School Libraries That Welcome Students – and Those That Don't

"What is it that makes one school library the heart of its learning community and another merely peripheral to the workings of the building?" asks New York City school library coordinator Olga Nesi in this *Knowledge Quest* article. "…What is the magic ingredient that can turn a library from a room where books are housed to the destination of choice in the school? Care." Here are the ways Nesi has seen some libraries *not* demonstrating care toward students:

- Expecting them to be fully mature before it is humanly possible to be so;
- Acting like we have never in our lives returned a book late or lost one;
- Expecting children to do as we say, not as we do;
- Being dismissive of or indifferent to their concerns (verbally or in demeanor);
- Not really wanting children in the school library lest they undo our hard work by being children.
- Being impatient, short-tempered, and brusque;
- Building collections of books we feel they *should* want to read;
- Not being reflective enough about our work to admit when it has fallen short of success;
- Being reductive in our thinking and thereby perpetuating the falsity that inquiry is linear and lockstep, and easily taught and learned;
- Keeping them dependent on us by over-managing their learning and reading;
- Viewing readers' advisory as an opportunity to pass judgment on a child's personal reading preferences;
- Thinking we are teaching responsibility by being martinets.

"The Transformative Power of Care" by Olga Nesi in *Knowledge Quest*, May/June 2012 (Vol. 40, #5, p. 8-15), http://www.ala.org/aasl; Nesi is at onesi@schools.nyc.gov.

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9. Websites with Digital Books, Songs, and Poetry

In this article in *The Reading Teacher*, Andrea Thoermer (University of Florida/ Gainesville) and Lunetta Williams (University of North Florida/Jacksonville) suggest ways to use technology to improve students' fluency. They recommend the following websites with digital books, songs, and poetry:

• Bus Songs – http://www.bussongs.com - more than 2,000 nursery rhymes and songs, most with lyrics, videos, and music.

• Children's Books Forever – http://www.childrensbooksforever.com/index.html - More than 20 illustrated books on primary-grade themes, including anger and bullying.

• Inkless Tales – http://www.inklesstales.com/stories - Fictional stories about a character named Fanny Doodle and her poodle, highlighting Dolch list words.

• Krazy Kats – http://www.krazykats-karaoke.co.uk/karaoke_kids.html - Additional links to sites with music and lyrics to nursery rhymes, Walt Disney movies, alphabet songs, traditional songs, and songs from PBS Kids.

• Magic Keys Books – http://www.magickeys.com/books - Digital storybooks with audio for primary and intermediate students.

• Reading Is Fundamental (RIF) – http://www.rif.org/kids/readingplanet/bookzone/read_aloud_stories.htm - Fun, animated stories for reading and sing-alongs, with Spanish stories and songs.

"Using Digital Texts to Promote Fluent Reading" by Andrea Thoermer and Lunetta Williams in *The Reading Teacher*, April 2012 (Vol. 65, #7, p. 441-445), http://www.reading.org; the authors can be reached at andreat@ufl.edu and lmwillia@unf.edu.

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10. Short Item:

a. Book recommendations from the International Reading Association – Every year the IRA polls thousands of children to get their book choices. Here are the 100 titles for 2012:
http://www.reading.org/Libraries/Awards/ChildrensChoices2012_web.pdf
Here are 30 trade books recommended by teachers, librarians, and reading specialists:
http://www.reading.org/Libraries/Awards/TeachersChoices2012_web.pdf
And here are 30 young adult books selected by middle and high-school students:
http://www.reading.org/Libraries/Awards/YoungAdultsChoices2012_web.pdf

Spotted in *The Reading Teacher*, April 2012 (Vol. 65, #7)

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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 e-links 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).

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- 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
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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