Marshall Memo 1021

A Weekly Round-up of Important Ideas and Research in K-12 Education
January 29, 2024

In This Issue:

Quotes of the Week

"Talent is equally distributed, opportunity is not."

Quoted in "Colleges Fled SAT in Spite of Its Utility" by David Leonhardt in *The New York Times*, January 12, 2024

"Teachers communicate unwitting expectations of their students' academic success through their verbal interactions during classroom instruction, their comments on student papers, their tracking of students into ability groups, and their lack of consistent support of students who need a deeper mathematical understanding."

Maureen Neumann (see item #4)

"When you tolerate failure, you promote mediocrity. People lose respect when you don't stay true to your word."

Dan Rockwell (see item #6)

"It's not all the teacher's responsibility to change student behavior. I think it's genuinely, super-transformative to think of the student as part of it as well."

Dorottya Demszky (quoted in item #2)

"You're actually wiser when you're counseling someone else."

Angela Duckworth (quoted in item #5)

"Dude, that's messed up."

A suggested "firm but nonconfrontational" response to a fellow student who's made an offensive comment or joke in "How Do You Respond to a Young Person Upset by Racist Jokes at School?" by Dashka Slater in *The New York Times*, January 1, 2024

1. Judy Willis and Jay McTighe on Grabbing Students' Attention

In this *Edutopia* article, Judy Willis and Jay McTighe say brain science tells us that only about one percent of the myriad stimuli picked up by our eyes, ears, and other senses makes it through the brain's attention filter to conscious attention. Evolution programmed our brains to prioritize anything related to danger and survival. If the environment is reasonably safe, what's prioritized is novelty – something that's changed in the immediate environment.

Willis and McTighe draw on these insights to address the perennial challenge of getting students to pay attention to instruction when they're distracted by non-academic sights, feelings, and thoughts. Here are suggestions for getting students to focus on a new topic or curriculum unit:

• *Surprise them*. Pique their curiosity by wearing something different, bringing in an unusual object, walking backward, or playing a song as students enter the classroom. (Walking backward was a teacher's prompt for a new math unit on negative numbers.)

• *Present odd facts, anomalies, or discrepant events*. "The brain is fundamentally a pattern-seeking organ," say Willis and McTighe. "Constructing patterns enables humans to make sense of the world…. When an established or expected pattern is broken, the brain is immediately aroused." A science teacher might grab attention by poking a sharpened wood cooking skewer through an inflated balloon without popping it. Why!?

• *Ask for predictions*. A first-grade teacher asks students to predict which objects will float and which will sink; a high-school psychology teacher asks for predictions on the results of a schoolwide student survey. "In both cases," say Willis and McTighe, "students are engaged and eager to find out if their predictions are correct."

• *Pose provocative, open-ended "hook" questions*. Examples: *Can what you eat prevent zits? Is aging a disease? What superpower would you want?* Students should have time to think silently about the question, jot down their thoughts, and then think-pair-share with another student before an all-class discussion.

• *Cite a current event or issue relevant to students*. For example, kicking off a unit on persuasion, a teacher has students read a newspaper article about a neighboring district's decision to require students to wear uniforms. Students discuss pros and cons, take a position, then switch sides to understand different perspectives and think about rebuttals.

• *Be funny*. "Humor is a guaranteed dopamine booster and can serve as a great attention hook," say Willis and McTighe. A sixth-grade math teacher begins a unit on ratio and

proportion by showing caricatures of celebrities in which various physical features are exaggerated.

Using a variety of these techniques can capture students' attention at the outset of a new topic, say Willis and McTighe. Holding their attention throughout the unit requires a mix of other strategies – authentic tasks and projects, inquiry-based instruction, cooperative learning, Socratic seminars, simulations and role-plays, having students create tangible objects in makerspaces, and allowing students voice and choice.

"6 Ways to Capture Students' Attention" by Judy Willis and Jay McTighe in *Edutopia*, January 18, 2024; the authors are at jwillisneuro@aol.com and jay@mctighe-associates.com.

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2. How Tutors Can Talk Less and Get Their Students Talking More

In this *Hechinger Report* article, Jill Barshay says the more students talk during tutoring sessions, "the easier it is for a tutor to correct misunderstandings or praise a breakthrough." But there's a tendency for tutors (and classroom teachers) to do too much of the talking.

Cuemath, an online tutoring company, decided to monitor the level of student participation by installing a talk meter – a kind of Fitbit for voice communication – that uses artificial intelligence to distinguish the tutor's from the student's voice. The meter pops up on the screen every 20 minutes during a one-hour math tutoring session displaying three different colors:

- Red if the student is talking less than 25 percent of the time;
- Green if the student is talking more than half the time.
- Yellow if student talk time is in between.

To see if the talk meter affected student participation in online tutoring sessions, the company asked researchers at Stanford University to conduct a study. Students (1,200 in the U.S. working with 700 tutors in India) were randomly divided into three groups:

• *A control group where neither the tutor nor the student saw the talk meter* – This was the baseline.

• *A group where only the tutor saw the talk meter* – The researchers found that tutors reined in their explanations and talked much less, but even though they tried to get students to talk more, student talk time increased by only 7 percent.

• *A group where both the tutor and the student saw the meter* – Students increased their talk time by 18 percent, with introverts most likely to participate more. The talk meter definitely prodded students to get more involved. "It's not all the teacher's responsibility to change student behavior," said Dorottya Demszky, the lead author of the study; "I think it's genuinely, super-transformative to think of the student as part of it as well."

Analyzing recordings of the tutoring sessions, Demszky and her colleagues noticed that in the control group and the group in which only the tutors only saw the talk meter, students tended to spend more time silently working on math problems. In the group where students

saw the talk meter, they started to verbalize their steps, filling the silences. In interviews, students said feedback from the meter gave a game-like feel to tutoring sessions. "It's like a competition," said one student. "So if you talk more, it's like, I think you're better at it." And students weren't just chatting; they were talking about the math and increased their use of math terms by 42 percent.

Some students found it distracting when the talk meter popped up. "It can get annoying," said one, "because sometimes when I'm trying to look at a question, it just appears, and then sometimes I can't get rid of it." Some tutors felt pressured to reach a 50-50 talk ratio and held back on making what they thought were important contributions to the session. One tutor said it was important to talk more when introducing a new concept or if the student was really struggling.

Barshay points out a couple of caveats with the study. The researchers weren't able to measure whether students' math achievement improved when they saw the talk meter. Second, students in the third group also took part in information sessions about the benefits of talking more. "So we can't tell from this experiment," says Barshay, "if the talk meter made the difference or if the information on the value of talking aloud would have been enough to get them to talk more."

Demszky is thinking about developing a talk meter for in-person classrooms, but is hesitant because the challenge is measuring not only the quantity of student talk but the quality of what they're talking about. In addition, AI natural language processing still has trouble with English spoken with foreign accents and filtering out background noise. One more thing, says Demszky: "Not everyone wants a Fitbit or a tool that gives them metrics and feedback."

"Proof Points: How to Get Teachers to Talk Less and Students More" by Jill Barshay in *The Hechinger Report*, January 15, 2024; Barshay can be reached at barshay@hechingerreport.org. A draft of the study, "Does Feedback on Talk Time Increase Student Engagement? Evidence from a Randomized Controlled Trial on a Math Tutoring Platform" by Dorottya Demszky, Rose Wang, Sean Geraghty, and Carol Yu is available here; Demszky can be reached at ddemszky@stanford.edu.

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3. In Reading, Moving Away from Decontextualized Strategy Instruction

In this article in *The Reading Teacher*, Kristin Conradi Smith and Tamara Williams (William and Mary University) and Ellen Frackelton (Williamsburg-James City Schools, Virginia) say that many literacy teachers (themselves included) have dutifully taught reading comprehension strategies. But we have "missed the boat," they say, by teaching strategies *in isolation* – not, as the 2000 National Reading Panel urged, in a "naturalistic setting." A class does a unit on inferring (for example), students are tested on it, different levels of mastery emerge, and then students move on to the next skill.

Why have teachers broken reading comprehension into skills and strategies and taught them in isolation? Smith, Williams, and Frackelton believe it stems from the accountability pressure of the No Child Left Behind era. Principals wanted to see which reading strategy was

being covered when they visited classrooms, and teachers wrote Students Will Be Able To… on the board and focused on teaching and assessing one at a time.

The problem, say the authors, is that decontextualized skill instruction "does not transfer well," and research points to a better approach: teaching comprehension in a *text-centered* way. "None of this is revolutionary," say Smith, Williams, and Frackelton; "in fact, one could argue that what we propose here is a *back to basics* approach. Instead of decontextualized strategy instruction and strategy-of-the-week type thinking, we are shifting to the big picture of comprehension." Comprehension is "thinking guided by print" (Charles Perfetti) – an active process rooted in meaningful print experiences.

Two elements need to be in place for text-centered reading to come alive in classrooms, say the authors. First, students need to have strong decoding and fluency in place so they can devote their full attention to the work of comprehension. Second, students must have a solid base of prior knowledge to bring to new texts because comprehension is about *building meaning*, not just finding the right answer.

A seminal 2009 study changed the authors' thinking about teaching reading comprehension. Margaret McKeown, Isabel Beck, and Ronette Blake compared fifth-grade reading instruction using three approaches:

- A business-as-usual basal textbook approach (the control group);
- A strategies approach – The class reads a passage and the teacher pauses, names a specific comprehension strategy (main idea, summarizing, drawing inferences), models it, and then has students discuss it;
- A content approach – Reading passages with a class, the teacher pauses at certain points and asks, *What's going on here? How does this connect with what we read earlier?*

McKeown, Beck, and Blake found that classes using the third approach outperformed the other two on several measures, including transfer; on some measures, the control group did better than the strategies group.

Key lessons from this study, say Smith, Williams, and Frackelton: (a) students do better when classroom discussions focus on ensuring understanding of the content, and (b) strategy instruction is much less effective. They believe teachers using the significantly more effective content approach should be mindful of:

• *Text selection* – With the isolated-strategy approach, teachers look for passages that lend themselves to, for example, teaching inference. With content instruction, the key is finding texts that are high-quality, offer diverse representations, are of interest to students, build vocabulary and knowledge, and vary in format, length, and genre, exposing students to a wide variety over time.

• *Sizing up a text before class* – The teacher gets familiar with the passage, anticipating areas that might present challenges for students and planning some pre-reading moves to scaffold instruction. Three key areas: text structure and organization, background knowledge, and vocabulary.

• *Routines and structures* – For read-alouds, this involves deciding on a series of stopping points where the teacher poses *What's-going-on-here* type questions or has students

summarize what's happened so far. If students are reading with a partner, they might be provided with a graphic organizer or a reading guide to structure their collaboration.

Smith, Williams, and Frackelton end with a cautionary note. The trap that too many teachers fall into (they include themselves) is spending too much time pre-teaching. "We talk too much," they say. "We set up too much. We spend too much time building background knowledge (*Oh, but that video was so engaging*!) and too much time building vocabulary (*I know my students needed to learn all eleven of those words!*). And what suddenly happens is we spent so much time setting the text up or modeling how a comprehension strategy worked that we robbed our students of time where they were actually reading."

"'No More Strategy of the Week': Considerations for Connecting Comprehension Instruction Back to the Book" by Kristin Conradi Smith, Tamara Williams, and Ellen Frackelton in *The Reading Teacher*, January/February 2024 (Vol. 77, #4, pp. 512-521); the authors can be reached at conradi@wm.edu, tamara.williams@wm.edu, and ellen.frackelton@gmail.com.

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4. Unconscious Gender Bias in Elementary Mathematics Classes

"Teachers communicate unwitting expectations of their students' academic success through their verbal interactions during classroom instruction, their comments on student papers, their tracking of students into ability groups, and their lack of consistent support of students who need a deeper mathematical understanding," says Maureen Neumann (University of Vermont) in this *Mathematics Teacher* article. She describes her work with preservice teachers who believed their classroom practices were equitable and then had *Aha* moments analyzing transcripts of their work with students.

One teacher realized that when boys acted out or were uncooperative, she moved their desks to the front of the class and asked them challenging, higher-level math questions. "In all cases," she said, "the disruptive students that I engaged in high-level questioning were boys. The boys would stop the negative behavior and become engaged in math concepts that were being explored. I did not realize that this was rewarding behavior with opportunities to learn math. I rewarded girls [who demonstrated] more-cooperative behavior with non-academic praise and encouragement."

Another teacher said, "I noticed something really interesting about my interactions with students when I asked higher-level questions… When I asked a girl a question about place value and she gave me the right answer, I just told her that she was right. However, whenever I asked a boy…, whether he gave a correct or incorrect answer, I would always follow up with, *How did you know?* or *Why did you do it like that?* I was really surprised to see this."

Below is a summary of data from this project, drawn from transcripts of different types of comments directed at boys, girls, and the whole class. Neumann says this type of analysis reveals similar patterns of unconscious bias toward students of marginalized groups.

• Academic praise – The teacher rewards students and reinforces the intellectual quality of their academic work:

- Examples: *Interesting strategy. I like your thinking in solving that problem.*

- To boys 47%, to girls 53%, to the whole class 0%

• Non-academic praise – The teacher rewards students and reinforces work or activity not related to the intellectual quality of academic work.

- Examples: *You're being nice and quiet today. I like how you put your name at the top of your test.*
- To boys 38%, to girls 0%, to the whole class 62%

• Academic criticism, intellectual quality – The teacher directs critical remarks at the lack of intellectual quality.

- Examples: *I don't think you're good at mathematics. This is a simple problem that you got wrong.*
- To boys and girls 0%, to the whole class 0%

• Academic criticism, effort – The teacher attributes academic failure to lack of effort.

- Examples: *You could do the math if you just put your mind to it and worked harder. You're not trying hard enough.*
- To boys and girls 0%, to the whole class 0%

• Mild nonacademic criticism – The teacher makes negative comments about violations of conduct, rules, and forms.

- Examples: *Megan, you need to raise your hand. Tom, stay in line.*
- To boys 75%, to girls 0%, to whole class 25%

• Harsh nonacademic criticism – The teacher makes negative comments that attract attention because they are louder, longer, and stronger than mild criticism.

- Examples: *Tom, I told you to get in line! I don't want to talk to you again about this. The next time I say something, no recess!*
- To boys and girls 0%, to the whole class 0%

• Low-level questions – The teacher asks questions that require memorization of facts.

- Examples: *What number follows 59? What is 6 times 5?*
- To boys 30%, to girls 32%, to the whole class 38%

• High-level questions – The teacher asks open-ended, probing/pressing questions that require higher intellectual processes, using information, not just memorizing it.

- Examples: *How did you figure out that 62 times 51 equals 3162? How did you know that 60 follows 59?*
- To boys 0%, to girls 0%, to the whole class 10%

• Facilitating academic interventions – The teacher facilitates learning by providing students with suggestions, hints, and cues that encourage and enable them to complete the assignment themselves.

- Examples: *How does solving 60 times 50 help you solve 62 times 51? Looking at the hundreds chart, what do you notice about the numbers that follow numbers that end in 9?*
- To boys 100%, to girls 0%, to the whole class 0%

• Short-circuiting academic interventions – The teacher prevents or truncates students' success by taking over the learning process.

- Examples: *Give me your pencil. When multiplying, you first… You've got this part wrong – 60 times 50 is 3000, not 300.*
- To boys 100%, to girls 0%, to the whole class 0%

• Academic information – The teacher gives information related to the lesson content.
- Example: *The sum of the interior angles for any triangle is 180 degrees.*
- To boys 11%, to girls 11%, to the whole class 78%

• Non-academic information – The teacher gives information that is procedural or related to classroom management.
- Example: *I need everyone to put their desks in groups of 4 for today's lesson.*
- To boys 20%, to girls 0%, to the whole class 80%

"Preservice Teachers Examine Gender Equity in Teaching Mathematics" by Maureen Neumann in *Mathematics Teacher: Learning & Teaching PK-12*, March 2007, reprinted January 2024 (Vol. 117, #1, pp. 72-79); Neumann is at maureen.neumann@uvm.edu.

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5. Building Secondary Students' Executive Functioning Skills

In this *Edutopia* article, Stephen Merrill focuses on the daunting challenges faced by young adolescents. "The problem of self-regulation is especially acute for teenagers," he says, "who are dramatically expanding their network of friends just as they're besieged by new, complicated school schedules, increased academic demands, and after-school obligations. It's a lot to keep track of, especially for novices." Here are some ways the adults in their lives can help:

• *Coach students in self-distancing*. This can help them step outside themselves, reframe a problem, and get a broader perspective. A possible question: *What would your closest friend tell you?* Specific strategies:
- Five minutes before a big test, students silently speak words of encouragement to themselves, focusing on effort versus ability.
- Students write for ten minutes as they face a challenging experience, reframing their anxiety as "a beneficial and energizing force."
- Students meet in groups to discuss preparation for an upcoming test or presentation, or write e-mails advising peers about how to manage their schedules. "You're actually wiser when you're counseling someone else," says Angela Duckworth.

• *Connect learning to a higher purpose*. Studies have shown that asking teens to write brief testimonials to future students explaining how learning can make the world a better place has a significant impact on the writers' grades, college attendance, and graduation rates. Specific strategies:
- Conduct beginning-of-year surveys about students' interests and passions.
- Incorporate regular experiences that connect school learning to real-world outcomes.
- Make time for rigorous classroom projects, ideally connected to students' interests.

• *Plan to practice, practice to plan*. Duckworth agrees that teaching students skills in calendaring and making priority lists is important, but, she adds, "unless the student perceives

that there's a real need, I don't think it works very well." Students' motivation is key, and that suggests including skill-building in regular school activities where it makes a day-to-day difference. Specific strategies:

- Model and scaffold scheduling, due dates, and study habits and regularly support them with retrieval practice, spaced review, and frequent low-stakes feedback.
- Teach students how to use tech tools like Google Classroom or Schoology and use them on a regular basis.

"8 Ways to Bolder Executive Function in Teens and Tweens" by Stephen Merrill in *Edutopia*, March 12, 2021

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6. Ten Principles for Holding People Accountable

In this *Leadership Freak* article, Dan Rockwell says 80 percent of leaders struggle to hold colleagues accountable. His suggested precepts:

- Relationships – There's trust and it's clear you're in it for the team, not yourself.
- Expectations – People are clear on which goals are important and which are less urgent.
- Competence– "It's foolhardy to set high goals for incompetent people," says Rockwell.
- Motivation – People need to care about the task.
- Ownership – They see its importance and care about doing it well.
- Deadlines – These should be reasonable for novices, challenging for veterans.
- Check-ins – Interim feedback happens at scheduled intervals.
- Development – "Focus on learning and growth," says Rockwell.
- Recognition – Success is celebrated.
- Consequences – When novices fail, there's feedback and support. With veterans, there's less mercy. "When you tolerate failure, you promote mediocrity," says Rockwell. "People lose respect when you don't stay true to your word."

"8 in 10 Struggle Holding People Accountable" by Dan Rockwell in *Leadership Freak*, January 23, 2024; Rockwell can be reached at dan@leadershipfreak.com.

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7. Expert Advice on Applying to College

In this *New York Times* special section, Ann Carrns and Tara Siegel Bernard provide answers to high-school students' questions about college. Click the link below to read experts' advice on each question:

- Is college worth it?
- Why is paying for college in the U.S. so complicated?
- Why is college so expensive, and what the heck is FAFSA?
- Pre-college decisions – AP courses, visiting colleges, applying early decision, and more
- Choosing a college – private vs. public, for-profit, community college, vocational
- Loans – federal, subsidized and unsubsidized, co-signer, payments, forgiveness

- Special circumstances – divorced parents, in school abroad, military, DACA students
- A glossary of terms to know

"How Do I Pay for College? Your Questions, Answered by Experts" by Ann Carrns and Tara Siegel Bernard, illustrated by Sean Dong, in *The New York Times*, January 21, 2024

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8. Graphic Novels on Electoral Politics

In this *School Library Journal* feature, Brigid Alverson recommends these fiction and non-fiction books on democracy and citizenship:

- *The Wolf in Underpants* by Wilfrid Lupano, illustrated by Mayana Itoïz and Paul Cauuet, grade 2-4
- *Wildfire* by Breena Bard, grade 3-8
- *The Leak* by Kate Reed Petty, illustrated by Andrea Bell, grade 4-7
- *Those Who Helped Us* by Ken Mochizuki, illustrated by Kiku Hughes, grade 5 and up
- *Drawing the Vote: A Graphic Novel History for Future Voters* by Tommy Jenkins, illustrated by Kati Lacker, grade 7 and up
- *Run: Book One* by John Lewis and Andrew Aydin, illustrated by L. Fury and Nate Powell, grade 8 and up
- *Radical: My Year with a Socialist Senator* by Sofia Warren, grade 10 and up
- *A Firehose of Falsehood: The Story of Disinformation* by Teri Kanefield, illustrated by Pat Dorian, grade 11 and up

"Democracy and Citizenship" by Brigid Alverson in *School Library Journal*, January 2024 (Vol. 70, #1, pp. 28-31)

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9. Short Item:

Dance Moves Around the World – In this delightful video, Ed People asked passersby in multiple countries to teach him their favorite dance steps – and they did!

"Best of Favorite Dance Moves" by Ed People, January 2023

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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 other educators very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 54 years' experience as a teacher, principal, central office administrator, writer, and consultant lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 60 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are 50 issues a year). Every week there's a podcast and HTMI version as well.

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- A free sample issue

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- The current issue (in Word or PDF)
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Core list of publications covered

Those read this week are underlined.

All Things PLC
American Educational Research Journal
American Educator
American Journal of Education
American School Board Journal
AMLE Magazine
ASCA School Counselor
ASCD SmartBrief
Cult of Pedagogy
District Management Journal
Education Digest
Education Gadfly
Education Next
Education Week
Educational Evaluation and Policy Analysis
Educational Horizons
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
English Journal
Exceptional Children
Harvard Business Review
Harvard Ed (formerly Ed. Magazine)
Harvard Educational Review
Independent School
Journal of Adolescent and Adult Literacy
Journal of Education for Students Placed At Risk (JESPAR)
Kappa Delta Pi Record
Kappan (Phi Delta Kappan)
Knowledge Quest
Language Arts
Learning for Justice (formerly Teaching Tolerance)
Literacy Today (formerly Reading Today)
Mathematics Teacher: Learning & Teaching PK-12
Middle School Journal
Peabody Journal of Education
Principal
Principal Leadership
Psychology Today
Reading Research Quarterly
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Social Education
Social Studies and the Young Learner
Teachers College Record
Teaching Exceptional Children
The Atlantic
The Chronicle of Higher Education
The Journal of the Learning Sciences
The Language Educator
The Learning Professional (formerly Journal of Staff Development)
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time
Urban Education