Marshall Memo 1064

A Weekly Round-up of Important Ideas and Research in K-12 Education
December 2, 2024

In This Issue:

Quotes of the Week

"A mind that is stretched by a new experience can never go back to its old dimensions."
Oliver Wendell Holmes

"If Tier 2 classes across the United States were focused on teaching what students most need to know to access their forthcoming Tier 1 curriculum unit, Tier 1 teachers would rightly have more confidence that their students could manage Tier 1 high-quality instructional materials. Instead of watering down the material, they could teach it, thus fulfilling the considerable promise of the new high-quality curriculum."
David Steiner in "Why Teachers Don't Use the High-Quality Instructional Materials They're Given" in *The 74*, November 12, 2024; Steiner is at d.steiner@jhu.edu.

"Be on the lookout for those kids who are not decoding proficiently. Vigilance is needed to keep students from slipping through the decoding cracks."
Timothy Shanahan (see item #3)

"Over all these years, what I have learned is that the student who brings forth our most negative emotional response needs us the most. How we speak about our students matters more than we realize, and even minor changes in our own behavior will lead to successful outcomes."
Veteran teacher and school psychologist Alex Fertig in "What I Learned About Disaffected Students" in *Communiqué*, December 2024 (Vol. 53, #4, p. 6)

"While the tools of communication have changed since Lincoln regaled crowds with his storytelling techniques, the human brain has not. Our minds are wired for story. We think in narrative and enjoy consuming content in story form."
Carmine Gallo in "What the Best Presenters Do Differently" in *Harvard Business Review*, April 27, 2022

1. The Impact of Generative Artificial Intelligence on Literacy Instruction

In this article in *Reading Research Quarterly*, Mary Kalantzis and Bill Cope (University of Illinois/Urbana-Champaign) explore the implications of generative artificial intelligence for the way we teach reading and writing in K-12 classrooms. ChatGPT and its buddies, the authors believe, are on a par with the invention of moveable type by Pi Sheng in 1039 and the printing press by Johannes Gutenberg in 1450, fundamentally disrupting the teaching of literacy.

Writing emerged in Mesopotamia about 5,000 years ago, initially as an instrument of state bureaucracy – keeping track of ownership and wealth and the siphoning off of surpluses. "Later," say Kalantzis and Cope, "it became a font of religious power that maintained the social order as an antidote to the deep social tensions generated by inequality." Eventually, writing blossomed into "a medium for the creation of great literature, profound philosophy, universal social memory, new knowledge, and a conduit for virtual telepresence that defies time and space. It became a medium for lyrical appeals to our better natures and a source of inspiration beckoning emancipation."

Immediately after the invention of the printing press, literacy tracked social class and wealth, with an educated, largely male ruling class in Europe writing to each other in Latin (the language of Gutenberg's Bible). Literacy was reserved for the elite and books were expensive. It was not until the 19th and 20th centuries that universal literacy became a social objective. Schools taught reading, writing, and arithmetic at a basic level, enough for the "modern" workplace. "Beyond the content of the literacy curriculum," say Kalantzis and Cope, "there was a moral economy of social practice" – punctuality, respect, cleanliness, discipline, and obedience.

Now that everyone had access to literacy, achievement (measured by newly developed standardized tests) fell on a bell-shaped curve. "The inventor of the 'normal' distribution curve," say the authors, "failed adequately to distinguish native intelligence from social conditions. It was useful to be able to rationalize social conditions as a function of intelligence and inequality as a natural state – but surely it was the social realities of literacy as much as native 'intelligence' that determined one's place on the curve." Stark differences emerged around income, race, and language. "This millennia-long story," say Kalantzis and Cope, "shows that we need to define literacy not by what it is, but by what it does."

Digital media leapfrogged traditional print and analog electronic communication (TV and movies), empowering millions to partake of the Internet and be their own meaning makers and social sharers. Schools haven't really caught up, say the authors, which is why the

potential impact of GenAI on schooling is so significant. “Until now,” say the authors, “humans had been in sole control of the production of represented meaning. Machines could reproduce meaning, but they could not make meaning.” Now students have a machine that can write for them!

“This throws literacy teaching into an immediate crisis,” say Kalantzis and Cope. “Writing is a laborious cognitive and biophysical process. It is almost impossible even for the best writer to avoid at least some small flaws. Then why write, when a machine can do it instantly and flawlessly, even if predictably and in a monotonous tone? Why read, when a text can be spoken to you, and can be told to speak with just the right level of difficulty for you?” GenAI threatens to automate a good deal of knowledge work – typically done by lawyers, accountants, advertising writers, commercial artists, editors, architects, translators, and customer service agents.

And what about teachers, when AI can seemingly be more responsive to each learner’s needs? “Teachers,” Kalantzis and Cope hope, “may dodge the AI bullet as a consequence of their duty of care role – to take care of children by day. [But] the role of teachers will at the very least change.”

“The turn to an AI whose technological basis is written text,” they continue, “means that literacy has a big, new job to do.” Here is their breakdown of traditional literacy instruction:

- Learn sound-letter correspondence.
- Understand the meaning of combinations of letters in words.
- Understand and write sentences and more.
- Read and understand extended texts.
- Appreciate literacy greatness.

In the past, it has taken schools about a decade to get a student through these steps. “This version of literacy is anachronistic,” say Kalantzis and Cope, “and it has been that for quite some time. Generative AI makes the situation worse.”

They are especially critical of standardized reading tests that judge students’ proficiency with multiple-choice questions that push students to find the test-maker’s right answers. “Tragically,” they say, “item-based comprehension kinds of tests remain a proxy for literacy, a cheap and lazy way to put a number on literacy performance.” Assessing writing has been more time-consuming, difficult, and expensive. First-generation automated writing assessments were an improvement, proving as reliable as human raters but giving canned feedback based on generalizations fed into the computer.

“This version of literacy,” they continue, “imposes textual rules, principles, and literary values in order to transmit them from one generation to the next. Not much room is left for learner agency or differences in versions of literacy.”

Kalantzis and Cope propose a different vision of literacy that recognizes “the agency of the meaning maker” – because every piece of writing is unique, based on the writer’s experience, values, and goals. “Literacy in this view is a social process of participation in meaning: from representation as meaning for oneself; to communication as meaning made for

others; to interpretation as the meaning one makes of the material traces of communication left by others… Of course, basic knowledge of the prosaic workings of literacy still matter. But the broader umbrella of design alternatives focuses on change, agency, difference, and the world-transformative capacities of every meaning maker."

[Next week's Memo will summarize the remainder of this article, including the authors' seven-step proposal for "cyber-social literacy learning" in the age of GenAI.]

"Literacy in the Time of Artificial Intelligence" by Mary Kalantzis and Bill Cope in *Reading Research Quarterly*, January/March 2025 (Vol. 60, #1, pp. 1-100); the authors can be reached at kalantzi@illinois.edu and billcope@illinois.edu.

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2. Using Word Games and Puzzles in Elementary Classrooms

In this article in *The Reading Teacher*, Mark Lauterbach (Brooklyn College) and Marcy Zipke (Providence College) say that playing online word games and puzzles helps elementary students recognize and manipulate phonemes, words, and phrases – a.k.a. metalinguistic awareness. This is an important component of skilled reading; research shows that paying attention to the details of language – phonology, orthography, morphology, semantics, and syntax – improves students' decoding, spelling, and comprehension.

"Developing students' interest and motivation for uncovering language conventions is an important part of a teacher's job," say Lauterbach and Zipke. "Word games and puzzles are uniquely suited for this, in that they can be solved individually, or in groups of any size. They can be tailored to specific student needs, or in support of the curriculum. Additionally, some students find them particularly engaging." Playing with word puzzles and games also makes students' thinking about language less rigid and more fun.

Lauterbach and Zipke experimented with the use of three *New York Times* games – Wordle, Spelling Bee, and Connections – with elementary students. Brief descriptions:

- *Wordle* – The goal is to find a 5-letter mystery word in six or fewer tries. With each guess, the correct letters turn green (right letter, right position) or yellow (right letter, wrong position).
- *Spelling Bee* – This is a puzzle with seven spaces for letters, six of them encircling one target letter. The goal is to make as many words using the central letter and as many of the other letters as possible. Letters can be used more than once, with extra points for words that use all the letters.
- *Connections* – The reader is presented with 16 seemingly disparate words and asked to group them into four categories – for example: break, holiday, leave, and recess (time off); holy, wholly, holey, and holi (sound the same, different spellings and meanings); ink, range, lack, and old (colors with their initial letters missing). Four mistakes are allowed.

With elementary students, the authors found it was helpful to start by modeling playing the game and thinking out loud about different strategies – in Wordle, for example, what letter to

start with, how to proceed with a green or yellow letter, strategy with double letters, and so on. Then the class plays the game together, with "gentle feedback" as they proceed, scaffolding, and gradual release of responsibility.

Where might word games fit into the school day? Some possibilities: in the 15 minutes before lunch; during a brain break; during indoor recess or free time; sending them home as homework; or creating a puzzle center for choice time. For resources, students might use dictionaries, word walls, and brainstorming friends, with Google and Siri off limits. An additional activity might be taking advantage of websites that allow users to create their own versions of Wordle, Spelling Bee, and Connections. And there are plenty of technology-free options, including putting letters on the board and challenging students to make as many words as they can from the letters.

"These puzzles and games are an opportunity to create engagement around activities that promote metalinguistic awareness," conclude Lauterbach and Zipke. "However, as engaging and useful as these puzzles and games are, they are in no way systematic or comprehensive enough to replace the scope and sequence of a research-based reading curriculum."

"Wordling with Elementary Students: Developing Discrete Literacy Skills Through Puzzles and Word Games" by Mark Lauterbach and Marcy Zipke in *The Reading Teacher*, November/December 20234 (Vol. 78, #3, pp. 195-201); the authors can be reached at mlauterbach@brooklyn.edu and mzipke@providence.edu.

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3. Should Phonics Be Taught in Middle and High School?

In this article in *Journal of Adolescent and Adult Literacy*, Timothy Shanahan (University of Illinois/Chicago) asks whether decoding should be taught beyond the elementary level. He conducted an extensive search and uncovered very few helpful studies. "We don't know much about how best to teach decoding in grades 2-12," says Shanahan. "Existing data provide little encouragement for teaching such skills at those grades and offer no direction for the best way to structure such instruction if we wanted to provide it anyway."

Some recent research at ETS has left Shanahan "dumbfounded" at the number of middle- and high-school students who lack decoding and word reading skills. The kids below the word-reading threshold, researchers found, aren't making progress no matter what their schools do. "Being low in word reading," says Shanahan, "appears to be a major barrier to normal reading progress in the upper grades."

The challenge is finding curriculum materials that teach the basics of reading without adolescents feeling like they're being treated like kindergarteners and shutting down. But these kids really need to learn to decode. Maybe they didn't get much phonics instruction in the primary grades, or maybe they got it (perhaps a heavy dose) and for some reason it didn't stick. Either way, what is to be done? Here's what Shanahan suggests:

• *Emphasize vocabulary for all students*. Middle- and high-school classes should spend considerable time on word knowledge, breaking down multisyllabic words (yes, using phonics), the fluent reading of texts, comprehension, learning from text, and writing.

• *Identify the super-low students*. "Be on the lookout for those kids who are not decoding proficiently," says Shanahan "Vigilance is needed to keep students from slipping through the decoding cracks." It doesn't matter if it was because of inadequate past instruction, learning disabilities, or transfer from other schools.

• *Provide those students with high-quality Tier 2 phonics instruction*. This should use age-appropriate methods, including words from YA novels and students' everyday lives.

• *Build a sense of agency*. Target students should understand why they're getting this special attention, and it's important that they see quick results. "Students are more likely to be motivated to learn," says Shanahan, "if they have sufficient knowledge to gain a sense of control and a reason to value the instruction."

"What Role, If Any, Should Phonics Play in a Middle School or High School? The Answer May Surprise You" by Timothy Shanahan in *Journal of Adolescent and Adult Literacy*, October 2024; Shanahan can be reached at shanahan@uic.edu.

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4. Improving Students' Understanding of Multitasking

In this *Cult of Pedagogy* article, Jennifer Gonzalez summarizes her interview with cognitive scientist/author Megan Sumeracki on how multitasking can create problems in classrooms. Trying to do two things at once is not an issue when one of them is less cognitively demanding. Sumeracki says she can blow-dry her hair while planning for an upcoming class because her hair care is so familiar that it doesn't require conscious attention, freeing up the mental bandwidth to perform a higher-order or controlled task. Similarly, she can listen to a podcast while taking a walk and fold laundry while watching TV.

Multitasking runs into trouble when both tasks require attentional control. Either we aren't paying full attention to one of them, or we switch back and forth, degrading performance in both. Driving a car is an automatized process most of the time, leading us to believe we can text or have an emotional conversation while behind the wheel, but if something unexpected happens – a car swerves in front of us or brakes suddenly – we can be in big trouble.

Sumeracki points to several situations where students are multitasking in ways that aren't helpful:

• *Round robin reading* – All students are supposed to be listening to the classmate who's reading aloud, but some may be looking ahead and rehearsing the passage they'll be asked to read, or fretting about performing well when it's their turn. "If the purpose of reading out loud is to practice speaking aloud," says Sumeracki, "maybe that's okay. We're really just all taking turns practicing. But if we're supposed to remember and try to understand the content of what's being read, then that's not going to work."

• *Icebreakers* – When students are told to think of a fun thing about themselves (or two truths and a lie) to share with the class as part of a get-acquainted activity, their attention is often focused on thinking of something clever to say rather than paying attention to what classmates are sharing, and the purpose of the activity – getting to know one another – is largely defeated. (Gonzalez suggests better icebreakers here.)

• *Notetaking during lectures* – It's asking a lot for students to simultaneously listen to a teacher's explanation, read the bullet points in PowerPoint slides, and take notes – three pretty demanding tasks. Better to have fewer words and more images on slides, and pause after each chunk of explanation, giving students time to take it in and write it in their own words.

• *Device distraction* – Studies have shown that having a turned-on cellphone nearby messes with students' concentration – they're wondering if that buzz was for them and are not paying full attention to what their teacher or classmates are saying.

Sumeracki closes with a few suggestions for reducing dysfunctional multitasking in classrooms:

- Explain the science to students so they understand where multitasking doesn't work.
- Structure thinking-intensive activities one task at a time to avoid mental overload.
- Build in cognitive breaks – With her college students, Sumeracki has found that occasionally giving them a chance to check phones improves focus the rest of the time.

But occasionally it's good to just space out. "There's some research," she says, "showing that when you mind-wander, sometimes creative problem-solving can fall out of it. We absolutely do need to focus sometimes, and it's good to practice that focus, but letting our minds wander sometimes and not being too rigid about exactly what we need to focus on at any given moment can be okay."

"Avoiding the Pitfalls of Multitasking in School" by Jennifer Gonzalez and Megan Sumeracki in *Cult of Pedagogy*, November 24, 2024; Gonzalez is at gonzjenn@cultofpedagogy.com.

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5. How Can Young Students Understand Numbers Without Counting?

In this *Hechinger Report* article, Jill Barshay says that subitizing – having students recognize number quantities without counting – is an increasingly popular practice in primary-grade math instruction. Subitizing comes from the Latin word *subito*, meaning suddenly; the idea is that if a child is quickly shown a grid of, for example, four dots, knowing right away that it represents four is a different skill from counting 1, 2, 3, 4.

"For more than 25 years," Barshay reports, "prominent researchers in early childhood math education have been promoting subitizing as something that schools should be teaching to build number sense. According to this theory, subitizing complements explicit counting instruction to give meaning to the concept of quantity. Without subitizing skills, children may struggle to grasp what the numbers they are counting, or simply uttering, actually mean."

Many children are able to subitize small numbers by the time they go to school, especially if they've played board games involving dice. Kids who haven't learned how to

subitize are at a disadvantage when they get to kindergarten. "The reason for that," says Art Baroody (University of Illinois/Urbana-Champaign), "is subitizing involves constructing an understanding of what one is, of what two is, of what three is, of what four is, which is the conceptual basis of number sense. So there's much that builds on that understanding."

With clusters of dots larger than six (the biggest number on dice), kids who can subitize may think in terms of clusters – with seven dots, seeing groups of three and four – which helps with the important skill of composing and decomposing numbers. Children who can think in terms of twos and threes and fours find it easier to grasp multiplication and division and understand the relationship between a part and a whole with fractions. This suggests that subitizing should be taught beyond the primary grades.

The research on subitizing is positive but still quite thin, reports Barshay. There are studies suggesting that infants as young as five or six months appear to notice changes in quantities. Some states and school districts are moving ahead with developing this skill; subitizing is included in the Illinois state math standards for kindergarten. There's also an equity dimension: building strong conceptual understanding in the early grades can reduce socioeconomic gaps in math achievement.

Researchers have this suggestion for teachers and parents who are teaching subitizing: show the images of quantities for less than ten seconds so children don't have time to count.

"A Theory of Learning Numbers Without Counting Gains Popularity" by Jill Barshay in *The Hechinger Report*, November 25, 2024; Barshay is at barshay@hechingerreport.org.

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6. Helping English Learners Start Writing and Build a Writing Identity

In this *English Journal* article, Sinélia Peixoto and Thea Williamson suggest strategies to help students who are new to the U.S. and the English language build confidence and fluency as writers:

• Teachers modeling editing, making mistakes, and looking up words – This helps students become more confident and motivated to learn the writing process and get their thoughts down on paper (or a screen).

• Using Google and Google Translate as tools for writing and research – This provides a scaffold for English learners to understand words and let their writing flow.

• Using images as inspiration for writing – This adds interest and meaning when English words are challenging.

• Using sentence stems and models – This lowers the pressure on students and creates momentum for coming up with their own English sentences.

• Using graphic organizers and story planners – These non-verbal tools provide structure for capturing ideas.

• Prioritizing meaning and story over standard orthography – Students are encouraged to use their life experiences and understandings as they create stories.

• Having teachers and classmates read early drafts – This helps English learners persist when writing is difficult, and makes room for informal commentary.

"When Would You Feel Like a Writer? Exploring Writing with Newcomer Students" by Sinélia Peixoto and Thea Williamson in *English Journal*, September 2024 (Vol. 114, #1, pp. 65-73); the authors can be reached at sinelia1@gmail.com and thea.williamson@gmail.com.

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7. Fostering Language-Inclusive ELA Classrooms

In this *English Journal* article, Victoria Singh Gill (Lesley University) and teacher educator Saba Khan Vlach urge secondary ELA teachers to use multilingual young adult novels in their classrooms. For starters, they suggest:

- *Other Words for Home* by Jasmine Warga, a middle-grades free verse novel (Arabic)
- *All My Rage* by Sabaa Tahir, a novel about friendship (Urdu and Punjabi)
- *She Is a Haunting* by Trang Thanh Tran, a horror novel (Vietnamese)
- *Secret of the Moon Conch* by David Bowles and Guadalupe Garcia McCall, a time-bending, dual-perspective fantasy novel (Nahuatl and Spanish)

"(An)Other Language: Youth Literature to Support Language Inclusivity in the ELA Classroom" by Victoria Singh Gill and Saba Khan Vlach in *English Journal*, September 2024 (Vol. 114, #1, pp. 27-33); Gill can be reached at vgill@lesley.edu.

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8. The Highs and Lows of School Psychologists

In this article in *Communiqué*, San Diego psychologist Dylan Barton reports the results of a recent survey in his district. Here's what brought psychologists joy and angst:

• Positives:

- Making personal, helpful connections with students and helping them flourish;
- Solving problems and doing "detective work" to understand student problems and help colleagues find root causes;
- Providing and orchestrating direct interventions for students;
- The autonomy of not being tied to a teaching schedule;
- Not being "policed" by administrators;
- Collaborating with educators in their schools;
- Testing students and finding areas of strength and targets for intervention.

• Negatives:

- Authoritarian administrators who tell them what to do without dialogue, sometimes making psychologists feel intimidated;
- Clerical and administrative duties;
- Overwhelming, unpredictable paperwork;
- Excessive, repetitive recordkeeping.

"Some days I feel stuck in my office, crushed by an onslaught of e-mails and spending seemingly endless hours writing reports," says Barton. "I might not work with a single student or even talk to anyone else. Those days are hard. Other days, I have space to utilize a wide breadth of my clinical skills. Using my own expertise and collaborating with others, I feel I can help to resolve students' problems efficiently and elegantly. On those days, I leave the office and make a mental note: 'Today, I made a positive difference.' Those days are wellsprings of joy and fulfillment!"

"The Joys and Challenges of School Psychology Practice" by Dylan Barton in *Communiqué*, December 2024 (Vol. 53, #4, pp. 21-23)

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9. Thought-Provoking Questions for Educators

In this article in *ED Magazine*, Grace Tatter explores the successful podcast *Free Range Humans*, in which Jal Mehta and Rod Allen interview a wide range of thought leaders. Here are some of the questions they ask in a "lightning round" at the end of each interview:

- What's one thing you've changed your mind about?
- What is one book, podcast, or movie that is spurring your thinking right now?
- What's the number one thing you want schools to get right?
- Is there something you're not good at?
- Is there a technology you don't feel totally comfortable using?
- What's one thing that lots of people in education think is right that you think is wrong?
- What field or domain should we be looking at in education for inspiration?

"Free People" by Grace Tatter "Free People" by Grace Tatter in *ED Magazine*, Fall/Winter 2024 (#175, pp. 24-31)

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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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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
Ed Magazine
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 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
Language Magazine
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