

Marshall Memo 642

A Weekly Round-up of Important Ideas and Research in K-12 Education

June 20, 2016

In This Issue:

1. [Balancing responsiveness and rigor in high-school science classrooms](#)
2. [A Nevada district implements the Danielson framework](#)
3. [Grand Rapids attacks chronic absences](#)
4. [Why a Response to Intervention initiative failed in two Florida schools](#)
5. [Shifting from superficial to effective supervision of principals](#)
6. [Standards for good thinking and discussion in a polarized world](#)
7. [Five ineffective literacy practices](#)
8. [Five keys to effective teaching](#)
9. [Suggestions for harnessing the energy of fidgety students](#)
10. [A critical look at math word problems](#)
11. [Online resources for using hip-hop in classrooms](#)
12. Short item: [An early draft of a *Hamilton* rap](#)

Quotes of the Week

“Many forms of government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all wise. Indeed, it has been said that democracy is the worst form of government except all those other forms that have been tried from time to time.” (1947)

Winston Churchill (quoted in item #6)

“A directive for change that does not purposefully challenge assumptions is not likely to produce the change in equity outcomes.”

Wendy Cavendish, Beth Harry, Ana Maria Menda, Anabel Espinosa, and Margarete Mahotiere (see item #4)

“[H]igh levels of rigor cannot be attained in classrooms where teachers are unresponsive to students’ ideas or puzzlements.”

Jessica Thompson, Sara Hagenah, Hosun Kang, David Stroupe, Melissa Braaten, Carolyn Colley, and Mark Windschitl (see item #1)

“Despite countless other responsibilities, superintendents cannot supervise principals from a distance.”

John Fitzsimons (see item #5)

“To make independent reading worthy of class time, it must include instruction and coaching from the teacher on text selection and reading strategies, feedback to students on their reading, and text discussion or other post-reading response activities.”

Nell Duke (see item #7)

1. Balancing Responsiveness and Rigor in High-School Science Classrooms

In this *Teachers College Record* article, Jessica Thompson, Carolyn Colley, and Mark Windschitl (University of Washington/Seattle), Sara Hagenah (Boise State University), Hosun Kang (University of California/Irvine), David Stroupe (Michigan State University), and Melissa Braaten (University of Wisconsin/Madison) start with a striking research finding: only about 13 percent of elementary and secondary math and science lessons are both responsive and rigorous – that is, respectful of students’ ideas while also teaching the required curriculum. “Our theory of action for rigorous and responsive teaching in classrooms,” say the authors, “rests on the assumption that teaching is fundamentally about setting intellectually meaningful learning goals and then creating opportunities for students to learn through mediated action... Rigorous curriculum is necessary but not sufficient for ambitious and equitable science learning experiences... [H]igh levels of rigor cannot be attained in classrooms where teachers are unresponsive to students’ ideas or puzzlements.”

The tendency that Thompson and her colleagues observed in the secondary science classrooms they observed was that teachers either acted as the sage on the stage, dispensing science knowledge for students to memorize and regurgitate, or “elicited students’ ideas, opening up a range of possible ideas for consideration, but then narrowed the set of possible ideas to the correct science idea by the end of the class period, doing little to support subsequent sense-making.” Why? In both cases, it was because teachers wanted to keep their classroom under reasonable control and cover the curriculum. These two concerns acted as “sink stoppers” on the flow of ideas in classrooms, say the authors, preventing the ideal balance of curriculum coverage and student participation.

The very small number of teachers who were successful in combining rigor and responsiveness did three things: (a) Responding to and building on students’ science ideas and getting them talking in whole-class and small-group settings; (b) Encouraging participation in a learning community and reinforcing classroom norms; and (c) Eliciting and incorporating students’ lived experiences to build vivid scientific stories. An example of the third was a student telling the class that his family’s dog got sick, the vet’s blood tests found the dog was 15-20 percent wolf, and the dog had to be put down. This story became a shared problem that the class worked on for three weeks in the context of genetic variations among dogs.

The secret sauce, say the authors, is for teachers to orchestrate or seize upon teachable moments, in any part of the lesson, have students juxtapose their first-hand experiences with known scientific ideas and concepts, and talk ideas through in a supportive classroom

environment. “In the small fraction of lessons we coded as highly rigorous and responsive,” say Thompson and her colleagues, “students authored and owned scientific explanations while carefully listening and building on the ideas of others. Both teachers and students regularly engaged in in-the-moment sense-making and focused on synthesizing knowledge. Multiple students’ ideas were framed as legitimate resources that helped the whole class make progress on canonical science understandings, even as the science was localized in students’ experiences. Scientific knowledge was treated as partial and under constant revision. This allowed for a hybrid form of epistemic authority that combined canonical science knowledge with students’ locally authored science ideas. The result was shared scientific understandings that were made public, challenged, and revised until well-warranted.”

Why did so few lessons successfully balance student voice and curriculum rigor? The authors believe it’s because of the perennial difficulty of juggling four classroom dilemmas:

- How much to privilege canonical science knowledge? When there was too much of a gap between curriculum content and students’ ideas and misconceptions, teachers tended to revert to the Initiate-Respond-Evaluate pattern to keep students on track and move the lesson along.
- How much to build on ideas from previous lessons? In the most effective classrooms, teachers jotted students’ ideas on easel sheets, posted them on the wall, and were able to quickly point out connections from previous lessons.
- How many students should take part in a discussion before moving on or layering on the “correct” information? In the best lessons, there was less concern about the number of students participating than the *quality* of responses and the whole class putting together a good understanding of the topic.
- How to legitimately use students’ lived experience and language to shape instruction? This was the biggest challenge for teachers, with fewer than 3 percent successfully incorporating real-life stories into lessons. Most of the time, teachers borrowed language from students’ stories and incorporated it into teacher-centered explanations. “By coopting students’ language and experiences in this manner,” say the authors, “teachers preserved their own storyline for science and marginalized student contributions by treating them as tokens.”

“How teachers and students navigated these in-the-moment dilemmas – or not – helps explain the full range of more or less successful intertwining of rigor and responsiveness in our data set,” conclude Thompson et al. In the most successful lessons, students did the intellectual heavy lifting, with the teacher skillfully orchestrating the process and keeping the focus on the big ideas students needed to learn – in their own way. “Thus, the rigorous and responsive classrooms became places where students’ lives framed the community’s science work.”

“Rigor and Responsiveness in Classroom Activity” by Jessica Thompson, Sara Hagenah, Hosun Kang, David Stroupe, Melissa Braaten, Carolyn Colley, and Mark Windschitl in *Teachers College Record*, May 2016 (Vol. 118, #5, p. 1-58), <https://tcrecord.org/library/abstract.asp?contentid=19366>; Thompson can be reached at jjthomps@uw.edu.

[Back to page one](#)

2. A Nevada District Implements the Danielson Framework

In this paper from the Institute of Education Sciences/Regional Educational Laboratory/WestEd, Andrea Lash, Loan Tran, and Min Huang report on their study of the implementation of a slightly modified version of the Danielson teacher-evaluation rubric in Washoe County, Nevada during the 2012-13 school year. The researchers focused on the summative ratings given 713 tenured and probationary K-12 teachers by their principals on the 22 components of the rubric, grouped into four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. Teachers' ratings carried high stakes since the state planned to use them to inform decisions about tenure, retention, and an anticipated pay-for-performance system. Washoe wanted to identify low-performing teachers for professional development and high-performing teachers for commendation and incentives.

Lash, Tran, and Huang answered four key questions underlying the district's proposed interpretation of teacher ratings:

- *Do principals' rubric ratings differentiate among teachers?* Not nearly as much as would be expected, say the researchers. The distribution of ratings for the 22 rubric subcomponents showed that at least 90 percent of teachers were rated Effective or Highly Effective (the one exception: 88.4 percent of teachers were given the top two ratings in component 3b, using questioning and discussion techniques). Somewhat more teachers were rated Effective than Highly Effective, a much smaller number were rated Minimally Effective, and fewer than 1 percent of teachers were given the lowest rating. All this, the researchers conclude, "suggests that principals are discriminating among effective and highly effective teachers but rarely identifying teachers as minimally effective or ineffective." Why did Washoe principals so rarely give the bottom two ratings? the researchers wondered. This contrasts to other districts using the Danielson rubric, where most ratings cluster between Level 3 and 2.

- *What is the internal consistency of ratings within each domain and across all domains?* In other words, do ratings capture a single, cohesive area of teaching practice? "Within each domain," report Lash, Tran, and Huang, "principals were consistent in their scoring of teachers. Teachers who received a high rating in one component tended to receive a high rating for the other components of the domain as well; those who received a low rating for one component tended to also receive a low rating for the other components." Does this mean that there aren't meaningful distinctions within and among the rubric components? Don't they provide information on different aspects of teaching?

- *Do the empirical data support the hypothesized grouping of rubric components into domains?* In other words, is each of the four domains distinct from the others? "The empirical data do not support grouping ratings into four domains," the researchers conclude. "[R]atings for the four groupings were so highly correlated as to suggest that each group measured a common feature of teaching."

There are two possible interpretations for this finding. One is that "the four domain ratings do not provide information about different aspects of teaching," say Lash, Tran, and Huang. "The other is that they do provide information about different aspects of teaching but that those aspects are so highly correlated that knowing about one aspect provides information

about the others. In either case the analysis does not support interpreting the four domain scores as measurements of distinct aspects of teaching; instead, the analysis supports using a single rating, such as the average over all components of the system to summarize teacher effectiveness.”

• *Do the ratings from classroom observations correlate with student learning?*

Comparing Danielson ratings with the scores of grade 4-8 teachers for whom Nevada Growth Model value-added data were available, the researchers found a “positive and significant relationship” with all but one of the Danielson domains – Professional Responsibilities. So for the most part, classroom ratings predicted impact on student test scores.

The researchers draw three conclusions from their study. First, Washoe officials should explore why the distribution of teacher ratings was so skewed to the upper end of the 4-3-2-1 scale. Second, the district needs to ask whether giving four separate domain ratings is warranted, since there’s such a strong correlation among them. Finally, on the correlation between rubric ratings and VAM data, the researchers say, “Assuming the growth scores are sound measures of student learning, this finding offers some evidence that the observation ratings provide information about a teacher’s skill in promoting learning and can add to Washoe County School District’s confidence in interpreting a teacher’s rating as a measure of effectiveness.”

[There were several important questions the researchers didn’t ask in the Washoe study: How often did principals visit classrooms? How long did they stay? Were formal observations announced or unannounced? Could unannounced informal visits be used in summative rubric scores? I was able to get answers to these questions from a helpful Washoe official today: Tenured teachers in the study were visited once a year, non-tenured three times; formal visits were at least 30 minutes, with face-to-face pre- and post-observation conferences required; formals were announced in advance; and insights from informal visits could be included in summative rubric scoring if they were shared with teachers, but there were no requirements on frequency or face-to-face conversations.

This teacher-evaluation set-up goes a long way to explaining Washoe’s grade inflation and the intra- and inter-domain score uniformity found by the researchers. With so few classroom visits, with most teachers naturally putting on their best lesson for announced visits from the principal, with high stakes, with a very time-consuming process for each teacher evaluation, with no requirement for frequent unannounced visits, and with principals required to score teachers on 22 rubric elements based on only 1-3 formal classroom observations, it’s inevitable that scores would be inflated and lacking in the fine distinctions that could only come from multiple, unannounced visits, frequent conversations with teachers about classroom dynamics, and detailed teacher input on the rubric scores. K.M.]

“Examining the Validity of Ratings from a Classroom Observation Instrument for Use in a District’s Teacher Evaluation System” by Andrea Lash, Loan Tran, and Min Huang in an Institute of Education Sciences/Regional Educational Laboratory/WestEd paper, May 2016, https://ies.ed.gov/ncee/edlabs/regions/west/pdf/REL_2016135.pdf

[Back to page one](#)

3. Grand Rapids Attacks Chronic Absences

In this article in *NPR Ed*, Elissa Nadworny reports how the schools in Grand Rapids, Michigan addressed the issue of chronic absence (defined as students missing more than 10 percent of the school year). “Chronic absence is not just skipping school,” says Nadworny. “It’s more likely a mixture of truancy entangled with illnesses and family problems.” Sometimes it’s just a lack of attention to the number of days children are missing. “I really didn’t even know that there were problems with the attendance,” said one grandmother who was responsible for getting two children to their elementary school. Sure, they missed a day if it snowed, or if they didn’t feel like going to school, but she never counted them up. When the district called to tell her her both children were in the chronic absence group, “it was like, boom!”

That call was made because district officials realized that nearly 7,000 students (out of 17,000 enrolled) were chronically absent. But the first year’s efforts to improve student attendance produced zero gains. The district went back to the drawing board and came up with a slogan: *Challenge 5* – striving for fewer than five absences each school year. This simple, catchy, easy-to-remember slogan helped get the whole city on board via community partners, after-school programs, churches, businesses, the police, and families. Officials produced 8-foot poster boards for each school showing the current data on chronic absences, as well as maps showing the neighborhoods with attendance issues.

Grand Rapids also launched Parent University, a set of adult education classes conducted in schools and online. These taught computer skills, how to help students with their math homework, how to get a U.S. work permit, and other topics – and relentlessly plugged the Challenge 5 initiative in every class.

Over a three-year period, chronic absences went from a little under 7,000 to 3,400.

“What One District’s Data Mining Did for Chronic Absence” by Elissa Nadworny in *NPR Ed*, May 30, 2016, <http://www.npr.org/sections/ed/2016/05/30/477506418/what-one-districts-data-mining-did-for-chronic-absence>

[Back to page one](#)

4. Why a Response to Intervention Initiative Failed in Two Florida Schools

In this *Teachers College Record* article, Wendy Cavendish, Beth Harry, and Margarett Mahotiere (University of Miami), Ana Maria Menda (University of Nevada), and Anabel Espinosa (Florida State University) describe their study of the implementation of Response to Intervention in two culturally diverse urban schools after Florida mandated RTI. There were four major problems:

- Inadequate professional development before and during the RTI initiative left many educators confused about their roles and about the moral purpose of the initiative – to monitor and improve student performance in real time so fewer students would need to be referred to special education.

- Many educators continued to have fixed beliefs about disadvantaged students belonging in special education and didn't buy into the central purpose of RTI – to intervene effectively so that many students *wouldn't* end up there.
- The shift to a new statewide assessment and the decision to use the same tier 2 intervention (*Voyager*) for all students led many educators to question the intervention process, especially for ELLs.
- There were insufficient school-based resources to thoughtfully interpret data from student assessments and provide meaningful follow-up with struggling students (state funding was reduced at the same time the RTI initiative was launched).

“The top-down nature of the RTI implementation in these two schools and the lack of understanding related to the purpose of the change,” conclude the authors, “created tension that was further fueled by deficit views of the abilities of diverse students... A directive for change that does not purposefully challenge assumptions is not likely to produce the change in equity outcomes.”

“Implementing Response to Intervention: Challenges of Diversity and System Change in a High-Stakes Environment” by Wendy Cavendish, Beth Harry, Ana Maria Menda, Anabel Espinosa, and Margarett Mahotiere in *Teachers College Record*, May 2016 (Vol. 118, #5, p. 1-36), <http://bit.ly/28ICfH9>; Cavendish can be reached at wcavendish@miami.edu.

[*Back to page one*](#)

5. Shifting from Superficial to Effective Supervision of Principals

In this article in *School Administrator*, John Fitzsimons recalls how, as a new superintendent, he spent most of his time on board requests, collective bargaining, budget, capital planning, and other pressing issues. Of course he attended school plays, concerts, athletic events, and graduations, but he was rarely in classrooms and didn't supervise his principals in a meaningful way. Reading the research literature, especially the idea of “managing by walking around,” Fitzsimons realized that “superintendents cannot supervise principals from a distance.” He began to schedule regular school visits to observe day-to-day instruction and operations.

“Walking through the halls and into classrooms and sharing observations with the principal was a critical start to efficient management,” he says. “The new approach initially felt awkward, but soon I became comfortable regularly popping into classrooms. These visits led me to share research on best practices with the building leaders. The more present I was in the schools, the more positive the professional relationships with faculty and staff became.” In addition to observing classes with principals, he occasionally shadowed a student for a day's lessons, followed a student through an open house schedule, and ate in the faculty lunchroom.

Fitzsimons was especially interested in encouraging high-quality supervision of teachers. “Effective principals provide support throughout the school year via ongoing and informal meetings with teachers,” he says. “Rather than depending on infrequent formal evaluations to provide feedback to teachers, effective principals make frequent and

spontaneous classroom visits and provide immediate feedback.” Watching principals in action gave him a handle on improving their skills as instructional leaders.

“The Struggle to Supervise Principals” by John Fitzsimons in *School Administrator*, June 2016 (Vol. 73, #6, p. 12), no free e-link available; Fitzsimons can be reached at jtfphd@gmail.com.

[Back to page one](#)

6. Standards for Good Thinking and Discussion in a Polarized World

In this article in *Teachers College Record*, Jody Piro (Western Connecticut State University) and Gina Anderson (Texas Woman’s University) describe the online discussion forum, Socrates Café http://www.philosopher.org/Socrates_Cafe.html, which allows people with different viewpoints to have a civil exchange of ideas, hopefully driven by real curiosity about each others’ viewpoints. Because of the current polarization of opinions in the U.S. and the tendency of people to distort the truth, Piro and Anderson also recommend using the Universal Intellectual Standards (developed by Linda Elder and Richard Paul in 2008) to monitor the quality of reasoning about a problem, issue, or situation. Below are nine key standards, followed by probing questions. “To think critically,” say Elder and Paul, “entails having command of these standards.” Teachers should pose questions that push students to think clearly and hold them accountable for the quality of their thinking. “The ultimate goal,” they say, “is for these questions to become infused in the thinking of students, forming part of their inner voice, which then guides them to better and better reasoning.”

- *Clarity* – Could you elaborate further? Could you give me an example?
- *Accuracy* – How could we find out if that is true? How could we verify or test that?
- *Precision* – Could you be more specific? Could you give me more details?
- *Relevance* – How does that relate to the problem? How does that help us with the issue?
- *Depth* – What factors make this a difficult problem? What are some of the difficulties we need to deal with?
- *Breadth* – Do we need to look at this from another perspective?
- *Logic* – Does all this make sense together? Does your first paragraph fit in with your last? Does what you say follow from the evidence?
- *Significance* – Is this the most important problem to consider? Is this the central idea to focus on?
- *Fairness* – Do I (you, they, etc.) have any vested interest in this issue? Am I (you, they, etc.) sympathetically representing the viewpoints of others?

Even if students and facilitators use these standards, discussions in Socrates Cafés can be messy and contentious, conclude Piro and Anderson – they are “the worst form of pedagogy, except for all other pedagogies.” Which leads them to quote Winston Churchill: “Many forms of government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all wise. Indeed, it has been said that democracy is the worst form of government except all those other forms that have been tried from time to time.” (1947)

“A Typology for an Online Socrates Café” by Jody Piro and Gina Anderson in *Teachers College Record*, May 2016 (Vol. 118, #5, p. 1-26), https://works.bepress.com/jody_piro/30/; Piro can be reached at piroj@wcsu.edu.

[Back to page one](#)

7. Five Ineffective Literacy Practices

“Our expectations for students have increased dramatically,” says Nell Duke (University of Michigan) in this *Edutopia* article, “but our actual class time with students has not.” All the more reason to use every minute wisely – which means not spending time on instructional activities that don’t work. Duke says the research suggests the following time-honored practices are not helpful in developing students’ reading, writing, listening, and speaking skills:

- *Ineffective practice #1: Looking up words in the dictionary, writing definitions, and using them in a sentence* – “We have long known that this practice doesn’t build vocabulary as well as techniques that actively engage students in discussing and relating new words to known words,” says Duke – for example, semantic mapping.

- *Ineffective practice #2: Giving students stickers, bracelets, or fast-food coupons for reading* – These extrinsic incentives actually *undermine* motivation and make students *less* likely to choose to read, says Duke. “Opportunities to interact with peers around books, teacher ‘book blessings,’ special places to read, and many other strategies are much more likely to foster long-term reading motivation.”

- *Ineffective practice #3: Friday spelling tests on a single word list* – Unfortunately, this doesn’t lead to students spelling words correctly in everyday contexts, says Duke. Better to have students work on their own lists, geared to their stage of language development, and frequently analyze and use the words in their writing and speaking.

- *Ineffective Practice #4: Unsupported silent reading time* – “Studies have found that this doesn’t actually foster reading achievement,” says Duke. “To make independent reading worthy of class time, it must include instruction and coaching from the teacher on text selection and reading strategies, feedback to students on their reading, and text discussion or other post-reading response activities.”

- *Ineffective practice #5: Taking away recess as a punishment* – This is likely to reduce students’ ability to benefit from literacy instruction, says Duke. Why? Because physical activity before or after academic lessons helps students be more on task, especially students with ADHD (who, ironically, are the most likely to be kept in from recess). There are plenty of other consequences that don’t run the risk of reducing students’ attention in class, says Duke.

“What Doesn’t Work: Literacy Practices We Should Abandon” by Nell Duke in *Edutopia*, June 3, 2016, <http://www.edutopia.org/blog/literacy-practices-we-should-abandon-nell-k-duke>; Duke can be reached at nkduke@umich.edu.

[Back to page one](#)

8. Five Keys to Effective Teaching

In this *Edutopia* article, editor Rebecca Alber spotlights five classroom practices identified by John Hattie in *Visible Learning for Teachers* (Routledge, 2011) that make the biggest difference to student learning:

- *Clarity of purpose* – At the beginning of a curriculum unit or project, students need to see why they’re doing it, the learning goals, the criteria for success, and models of high-quality end products.

- *Classroom discussion* – “Teachers need to frequently step offstage and facilitate entire-class discussion,” says Alber. “This allows students to learn from each other. It’s also a great opportunity for teachers to formatively assess (through observation) how well students are grasping new content and concepts.”

- *Feedback* – Students need to know how they’re doing as individuals and as a class. They also need opportunities to give their teachers feedback to allow for adjustments in pedagogy and materials.

- *Formative assessments* – Minute-by-minute, day-by-day, and week-by-week checks for understanding are essential to students knowing how they are doing with respect to the ultimate learning goals.

- *Metacognitive strategies* – Students need opportunities to plan, organize, direct, and monitor their own work – and to reflect as they proceed. “When we provide students with time and space to be aware of their own knowledge and their own thinking,” says Alber, “student ownership increases. And research shows that metacognition can be taught.”

“5 Highly Effective Teaching Practices” by Rebecca Alber in *Edutopia*, February 27, 2016, <http://www.edutopia.org/blog/5-highly-effective-teaching-practices-rebecca-alber>

[Back to page one](#)

9. Suggestions for Harnessing the Energy of Fidgety Students

In this *Edutopia* article, Youki Terada (Research Curation) says that students with ADHD can concentrate better if they are allowed to fidget. But what if their fidgeting distracts other students? Here are some solutions:

- Squeeze balls – Several products allow students to quietly squeeze (preferably under their desks): squishy balls, stress balls, koosh balls, and hand exercisers.
- Fidgets – These are small objects that help keep students’ hands occupied; bracelets, Rubik’s Cubes, slinkies, Silly Putty, and Playdough can also do the job.
- Velcro – Taping the hard-side of a Velcro strip to the underside of a desk gives students something to touch; emery boards or straws can also work.
- Gum – If gum is against the rules, chewable necklaces can help students stay focused, also plastic tubing or rubber bands wrapped around the end of a pencil.
- Doodling or drawing – This works for some non-ADHD students as well.
- Background noise – A fan at the back of the room, or the swishing sound of water in an aquarium, can help students focus.

- Music – Listening on headphones can work, as long as it doesn't interfere with what's happening in the classroom.
- Chair leg bands – A large rubber band or yoga band tied across the front legs of a chair allows students to push or pull against it with their legs.
- Exercise balls – Sitting on these can help many students focus.
- Swivel, wobble, disk, or rocking chairs – Being able to twist or rock is very helpful to students with ADHD.
- Standing desks – Standing up while working helps a broad spectrum of students.
- Desks with built-in swinging footrests – These reduce the noise that would otherwise come from foot-tapping.
- A stationary bike or small trampoline – One of these at the back of the class can provide a physical time-out for fidgety students – as well as healthy exercise.
- Classroom space for moving around – An open area can allow students to stand, stretch, dance, pace, or twirl.
- Flexible work locations – “Students don't have to do their learning at their desk,” Terada says. Perching on the windowsill might be good, or being allowed to move from one learning station to another.

“17 Ways to Help Students with ADHD Concentrate” by Youki Terada in *Edutopia*, August 14, 2015, <http://www.edutopia.org/discussion/17-ways-help-students-adhd-fidget>

[Back to page one](#)

10. A Critical Look at Math Word Problems

In this article in *Rethinking Schools*, Anita Bright (Portland State University) bemoans the way many of the word problems in published math materials assume an affluent, automobile-centered, middle-class lifestyle – for example:

- Calculating the number of parking spaces in a shopping mall (*NCTM Illuminations*)
- Planning a Hawaiian dream vacation (*Bridges in Mathematics 2*)
- Buying museum and Eiffel Tower tickets on a trip to Paris (*Harcourt Math*, 3rd grade)
- Renting jet skis (*Big Ideas Math*)
- Re-tiling a shower wall (*Glencoe Pre-Algebra*)
- Wallpapering one wall in a room (*Everyday Mathematics*, grade 5)
- Inheriting precious gems and horses and arranging parking for a yacht (Brooks/Cole's *Pre-calculus*, 5th edition)
- Calculating the productivity of migrant workers picking oranges (*mathhelpforum.com*)
- Calculating the calories in a nutritious breakfast whose ingredients don't include those common in Asian, African, Middle Eastern, and Latin American breakfasts (Holt McDougal *Algebra I*)

Mathematics is not value-free, Bright concludes. She urges teachers to have students look at such problems with a critical eye, think about the assumptions they embody, and come up with more-appropriate word problems that still align with rigorous standards. She recommends two books: *Rethinking Mathematics: Teaching Social Justice by the Numbers* by Rico Gutstein and

Bob Peterson, and *Radical Equations: Civil Rights from Mississippi to the Algebra Project* by Bob Moses.

“The Problem with Story Problems” by Anita Bright in *Rethinking Schools*, Summer 2016 (Vol. 30, #4, p. 14-19), www.rethinkingschools.org

[Back to page one](#)

11. Online Resources for Using Hip-Hop in the Classroom

(Originally titled “Pass the Mic: Teaching with Hip-Hop”)

In this *Education Update* article, Sarah McKibben suggests ways teachers can use hip-hop to engage students, and lists several resources:

- Cornell Hip-Hop Collection – <http://rmc.library.cornell.edu/hiphop>
- Fresh Ed – <http://freshed.urbanarts.org>
- Hip-hop Archive & Research Institute at Harvard – <http://hiphoparchive.org>
- Real Talk: Hip-Hop Education for Social Justice – www.bettinalove.com
- Science Genius by Dr. Chris Emdin – <http://chrisemdin.com/science-genius>
- Science with Tom - www.sciencewithtom.com

“Pass the Mic: Teaching with Hip-Hop” by Sarah McKibben in *Education Update*, June 2016 (Vol. 58, #6, p. 1, 4-5), available for purchase at

<http://www.ascd.org/publications/newsletters/education-update/jun16/vol58/num06/toc.aspx>

[Back to page one](#)

12. Short Item:

An early draft of a “Hamilton” rap – On May 12, 2009, Lin-Manuel Miranda (minus the long hair) appeared at a White House evening of music, poetry, and the spoken word and performed a rap that ended up in his multiple-award-winning musical, *Hamilton*. You can check it out at <https://www.youtube.com/watch?v=WNff7nMIGnE>.

Spotted in “What *Hamilton* and Its 11 Tonys Say About Grit and Privilege” by Andy Smarick in *The Thomas B. Fordham Institute Flypaper*, June 13, 2016,

<http://edexcellence.net/articles/what-hamilton-and-its-11-tonys-say-about-grit-and-privilege>

[Back to page one](#)

© Copyright 2016 Marshall Memo LLC
If you have feedback or suggestions,
please e-mail kim.marshall48@gmail.com

About the Marshall Memo

Mission and focus:

This weekly memo is designed to keep principals, teachers, superintendents, and others very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 44 years' experience as a teacher, principal, central office administrator, and writer, lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 64 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are 50 issues a year).

Subscriptions:

Individual subscriptions are \$50 for a year. Rates decline steeply for multiple readers within the same organization. See the website for these rates and how to pay by check, credit card, or purchase order.

Website:

If you go to <http://www.marshallmemo.com> 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
- Reader opinions (with results of an annual survey)
- About Kim Marshall (including links to articles)
- A free sample issue

Subscribers have access to the Members' Area of the website, which has:

- The current issue (in Word or PDF)
- All back issues (also in Word and PDF)
- A database of all articles to date, searchable by topic, title, author, source, level, etc.
- A collection of "classic" articles from all 11 years

Core list of publications covered

Those read this week are underlined.

American Educational Research Journal
American Educator
American Journal of Education
American School Board Journal
AMLE Magazine
ASCA School Counselor
ASCD SmartBrief
Better: Evidence-Based Education
Center for Performance Assessment Newsletter
District Administration
Ed. Magazine
Education Digest
Education Gadfly
Education Next
Education Week
Educational Evaluation and Policy Analysis
Educational Horizons
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
Essential Teacher
Go Teach
Harvard Business Review
Harvard Educational Review
Independent School
Journal of Education for Students Placed At Risk (JESPAR)
Journal of Staff Development
Kappa Delta Pi Record
Knowledge Quest
Literacy Today
Middle School Journal
Peabody Journal of Education
Perspectives
Phi Delta Kappan
Principal
Principal Leadership
Principal's Research Review
Reading Research Quarterly
Responsive Classroom Newsletter
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Teacher
Teachers College Record
Teaching Children Mathematics
Teaching Exceptional Children/Exceptional Children
The Atlantic
The Chronicle of Higher Education
The District Management Journal
The Journal of the Learning Sciences
The Language Educator
The Learning Principal/Learning System/Tools for Schools
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time Magazine
Wharton Leadership Digest