WELCOME BACK WELCOME BACK

Dennis-Yarmouth Regional School District

Instructional Office Newsletter

What Kinds of Math Errors Should Be Discussed with the Whole Class?

In this article in *Mathematics Teaching in the Middle School*, James Willingham (James Madison University), Jeremy Strayer and Alyson Lischka (Middle Tennessee State University), and Angela Barlow (University of Central Arkansas) say that students' mistakes can be fertile ground for promoting understanding – for all students, not just those who made the errors. But that depends on several factors:

- Setting classroom norms that value mistakes;
- Planning and selecting tasks that elicit mistakes;
- Structuring lessons to maximize student thinking and collaboration;
- Helping students focus on and discuss mistakes in helpful ways;
- The teacher following up effectively.

Here are the authors' suggestions for mistakes that merit a deeper dive, illustrated in a middle-school lesson on the Purple Paint Problem (mixing red, white, and blue paints in ratios that produce a particular shade of purple). First students were asked to think privately about their strategy, and then work in groups of four with the teacher circulating, observing, asking guiding questions, and watching for problems worth discussing. The teacher decided to focus on several groups' errors, using these criteria:

• ***The mistake is closely aligned with the goals of the lesson and moves the class toward solving the problem.*** Students who made the first error chosen by the teacher were on the right track but revealed a misunderstanding of part-whole relationships. The teacher used a document camera to display the group's paper and had all groups discuss what was right and wrong with the solution and then share their insights with the whole class.

(Continued on page 2)

Volume 6, Issue #1

Welcome back!

IMPORTANT DATES

September 3rd	**Labor Day**
September 4th	**1st Student Day**
September 10th	**Rosh Hashana**
September 11th	**Patriot Day**
September 19th	**Yom Kippur** Begins at Sundown
September 22nd	**Fall Begins @ 9:54PM**

IMPORTANT NOTICE:

Central office is a **fragrance-free zone** so please be respectful and plan accordingly when you visit.

Due to one of our members at the CO being highly sensitive to any type of fragrance, we ask that staff visiting/meeting at the Administration building refrain from using any scented products. Fragrances from personal care products, air fresheners, laundry and other cleaning products have been associated with adversely affecting a person's health. We ask that we all work together to make the environment a safe and healthy workplace for everyone.

Thank you very much for your cooperation!

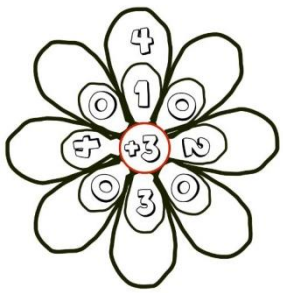
WELCOME BACK

(Continued from page 1)

- ***The mistake gives insight into students' understanding, fluency, and problem-solving.*** The teacher displayed a second group's erroneous solution with the document camera and asked groups to discuss it. Students zeroed in on problems with the meaning of *percentage*, which allowed them to build on insights from the first error.
- ***The mistake offers a novel approach to solving the problem.*** "Sometimes after a class has come to some conclusions about the solution to a problem, it can be beneficial to challenge their thinking," say the authors. At this point in the lesson, the teacher displayed an incorrect solution in which students used dramatically different percentages than most of their classmates. The reasoning was incorrect, but the process was on the right track. The teacher asked the class to explain where this reasoning went wrong, and this allowed students to solidify their conceptual understanding and meet the goal of the lesson.

"By focusing on mistakes that meet these criteria," say the authors, "teachers can move the focus away from the fact that a mistake was made and toward the reasons why the mistake is mathematically meaningful for learning. It is our hope that as students gain expertise in examining meaningful mistakes, they will eventually regard this skill as one of the most important mathematical tools they have at their disposal when solving problems."

Math Flowers



Of course not all student mistakes are worth discussing with the whole class. Some examples:

- Calculation mistakes – e.g., errors in long division;
- Mistakes that stem from a missing piece of information – e.g., not knowing that there are four quarts in a gallon;
- Mistakes from a failure to read or represent the problem carefully;
- Mistakes involving an inappropriate or incorrect application of a procedure.

Teachers should deal with errors like these in one-on-one or small-group conversations. "These personal interactions," say the authors, "can be used to help shift thinking into mathematically productive areas and avoid the negative reactions that students sometimes experience because of mistakes of this nature." Teachers might also target such errors for follow-up lessons or tutorials for particular students.

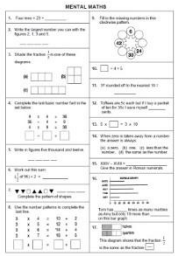
"Examining Mistakes to Shift Student Thinking" by James Willingham, Jeremy Strayer, Angela Barlow, and Alyson Lischka in Mathematics Teaching in the Middle School, April 2018 (Vol. 23, #6, p. 324-332), https://bit.ly/2pXzBG4; the authors can be reached at willinjc@jmu.edu, jeremy.strayer@mtsu.edu, abarlow5@uca.edu, and alyson.lischka@mtsu.edu.

The Scourge of Low-Quality Worksheets and How We Can Do Better

In this Cult of Pedagogy article, Jennifer Gonzalez shares a video of an 18-year-old high-school sophomore going off on his teacher about the "packets" she has students doing. "Yes, this student was disrupting class and his behavior was disrespectful," says Gonzalez. But she hears what he's saying about packets of worksheets being one of the lowest forms of pedagogy. "I've seen classrooms where teachers deliver instruction overwhelmingly through worksheets, or packets of worksheets," she says. "I have seen my own kids' schoolwork come home, and I have asked friends, other parents with school-age kids, and colleagues who consult in lots of schools and nearly all of them tell me that a lot of our students' instructional time is being spent hunched over some kind of worksheet. That's a problem." Her observations:

✓ ***Not all worksheets are bad.*** There's a continuum from what Gonzalez calls *powersheets* to *busysheets*. At the powersheet end of the spectrum are graphic organizers that serve as a tool for research, pre-writing, and note-taking. There are also original source documents for close study and annotation; data sheets for a lab; planning sheets for group projects; aids to data analysis and reflection; and helpful formative assessments. At the busysheet end are low-level filling in blanks, multiple-choice questions, labeling, word searches, word scrambles, and doing coloring where coloring doesn't add to students' understanding. Packets are a bunch of worksheets stapled together. "They could contain a lot of powersheets," she says, "but when a student refers to them as frickin' packets, it's highly likely that they are mostly made up of busysheets."

✓ ***Busysheets can be disguised in other formats.*** For example, they might be computer programs or apps that have students doing the same thing as busysheets.



✓ ***Busysheet teaching is not real teaching.*** That's because a worksheet in which students answer several low-level multiple-choice or fill-in-the-blank questions on a short reading passage on Maya Angelou is disconnected from anything meaningful, isolating skills and knowledge from a broader context and higher-level thinking. Reading comprehension exercises like these don't make students better readers and are no substitute for getting them reading a real book in search of evidence that supports a particular idea. The same is true of busysheets that ask students to label or identify various grammatical constructions; we've known for a long time that teaching grammar outside of a meaningful context doesn't make students better writers, or even improve their test scores. The worst of all, she says, are word searches, word scrambles, and crossword puzzles, which might as well be a list of definitions with blanks next to them. These are pure busywork, says Gonzalez, and have no instructional value. In addition, busysheets get students sitting still for too long and not interacting with each other or their teacher.

✓ ***Busysheets use a lot of paper and give teachers more stuff to correct.*** This is truly a double whammy! In addition, counting worksheet grades tells students that making mistakes and learning from classwork (assuming it's meaningful) is not part of the learning process.

Why do teachers use busysheets? From her travels in schools, Gonzalez has a long list: We don't have textbooks. Kids need skills practice. We have to differentiate. We're required to do the same work across our grade. We need substitute packets. Crowd control. Some kids like worksheets. We need bell-ringers and morning work. Students need fine-motor practice.

What to do instead of packets? Gonzalez suggests doing a worksheet audit, asking hard questions about where material falls on the powersheet-to-busysheet spectrum: is it contributing to student learning or just something to keep them busy? If the latter, then consider these higher-level classroom activities:

- Class discussions: think-pair-shares, gallery walks, philosophical chairs;
- Interactive experiences: simulations, role-plays, labs, escape rooms;
- Thought-provoking lessons: concept attainment, inductive learning;
- Group learning: jigsaw, reciprocal learning, games, icebreakers, maker challenges;
- Reading and writing: self-selected reading, research projects, journal writing, short writing challenges, long-term writing;
- Long-term projects: genius hour, project-based learning, service learning;
- Personalized learning: hyperdocs, stations or centers, listening to podcasts, blended learning.

"Frickin' Packets" by Jennifer Gonzalez in Cult of Pedagogy, March 26, 2018, https://www.cultofpedagogy.com/busysheets/

Young Adolescents 101

In this Cult of Pedagogy article, Jennifer Gonzalez says she never planned to teach middle school, but that was the level with job openings as she finished her training, so she dove in – and ended up falling in love with the kids' quirky characteristics. Here's her analysis of what's going on with 11-14-year-olds, along with advice for educators working at that level:

Kids care more about what their peers think than pretty much anything else. For example, a boy who loves chocolate milk refuses to have some in the cafeteria because someone said chocolate milk is babyish. Gonzalez suggests using this characteristic to our advantage: get the coolest girl in the class who likes Shakespeare to lead the lesson, or promise five minutes of time to chat with each other at the end of class in exchange for focused work.

They are horrified by what their bodies are doing. Pimples, body odor, oversize feet, developing too slowly, and all the rest. The best advice for teachers: don't draw attention to what's happening with individual students, and understand if a student doesn't want to be called up to the front of the class.

They tend toward hyperbole. There's a spider in the corner? "Get ready for a wall-climbing, horror-movie-screaming, Armageddon-style wig-out," says Gonzalez. "Whether it's due to limited life

WELCOME BACK

experience, hormones wreaking havoc on emotions, or the trying on of identities, young adolescents tend to exaggerate just a bit." Her advice: don't overreact, describe problems in a calm, rational way, maintain a sense of humor, and model the way a healthy person navigates life's little surprises: "Yes, spiders can be scary. Let's take care of this little guy so we can get back to work."

- ***They are mortified by public praise.*** Elementary students may beam at being recognized for having written a good essay, but that changes in middle school. A word to the wise: praise, but keep it private.
- ***They can't be trusted with confidences.*** "Throwing a surprise party for another teacher and want to let your kids in on the secret?" says Gonzalez. "Consider the surprise ruined." At this age, kids can't resist the temptation to share this kind of information. Her advice: "Treat your middle-school kids the same way you should treat the Internet: Don't share anything you aren't willing to see broadcast in public."
- ***They're fascinated with you as a human being, but then they're not.*** Young adolescents are emerging from being the center of their own childish universe to becoming aware that other people see the world differently. "They may be intensely interested in you, sometimes," says Gonzalez. "They'll ask all kinds of questions about your personal life, your family, the kind of food and music you like, and whether or not you cuss and drink outside of school hours." But then they'll revert to acting as though you don't exist. Her advice: Be restrained when answering personal questions (present a G-rated version of your life) and understand the transition they're going through.
- ***They are pulling away from their parents.*** This is a normal part of adolescence, but middle-school kids need adult guidance more than ever. Gonzalez's take: "As a trusted adult in their lives, you're in a unique position to influence these kids and fill in the gaps that have been left by their self-imposed isolation from their own families, so remember to *be the adult*: Advise responsibly, model smart decision-making, and unless you suspect genuine abuse, avoid taking the child's side over their parents'. You are in partnership with the student and their primary caregivers; be sure your students are always clear about that."
- ***They are still kids.*** One minute they're having a serious discussion about the symbolism of a Robert Frost poem, the next they're making rude noises with their armpits and asking if they can drink the water from the fish tank. And they're wiggling all the time, especially the boys. Gonzalez's advice: build movement into your lessons, take advantage of kids' childish enthusiasm and willingness to help out, and don't expect mature behavior to last very long. They're actually acting their age.

"8 Things I Know for Sure About (Most) Middle-School Kids" by Jennifer Gonzalez in Cult of Pedagogy, October 1, 2014, https://www.cultofpedagogy.com/middle-school-kids/

Disappointing Middle-School Math Assignments

"Students can do no better than the assignments they're given," says Keith Dysarz in this Education Trust report. "Our experience shows that classroom assignments strongly reflect the expectations that educators hold for their learners, providing a lens into the day-to-day experiences of students and their interaction with curricula."

Dysarz collected more than 1,800 sixth, seventh, and eighth-grade math assignments from six districts (urban, suburban, and rural) across the U.S. He defined assignments as in-school and homework tasks that students were expected to complete independently or with a group of peers. Assignments done with substitutes or during teacher-led lessons were not included. Dysarz asked 63 teachers leading 91 math courses for all of these kinds of assignments over a two-week period. This gave him a representative sample of the work students were doing on a day-to-day basis. Here are his findings in five areas:

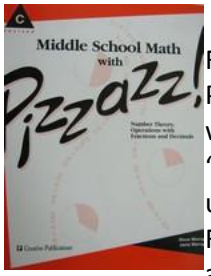
- ✓ ***Alignment to the Common Core*** – 73 percent of math assignments were at least partially aligned with one or more grade- or course-appropriate Common Core math standards. Many assignments addressed multiple standards.
- ✓ ***Cognitive challenge*** – Only 9 percent of assignments pushed student thinking to higher levels. Almost all assignments limited students to recalling a fact, performing a simple procedure, or applying basic knowledge to a skill or concept. This

WELCOME BACK

was even more pronounced in high-poverty schools, where only 6 percent of assignments required strategic or extended thinking (compared to 12 percent in low-poverty schools).

✓ ***Aspects of rigor*** – 87 percent of assignments focused on procedural skills and fluency, compared with 38 percent on conceptual understanding and 39 percent on application of a math concept. A key missing piece in 61 percent of assignments was including various types of mathematical representations, an important indicator of conceptual understanding – for example, understanding that the fraction 7/4 (symbolic) is "seven parts of size one-fourth" on a number line (visual) or measuring a string that has a length of seven fourth-yards (physical);

✓ ***Communicating mathematical understanding*** – Only 32 percent of assignments gave students an opportunity to communicate their thinking in the language of mathematics and/or justify their answers. Most assignments were answer-focused and didn't ask students to explain or defend their thinking at any point. Only 36 percent of assignments required students to write anything beyond the answer, and very few were conducive to discussions.



✓ ***Motivation and engagement*** – Only 3 percent of assignments gave students some choice (content, product, process, or math tool), and only 2 percent included real-world events or students' personal experiences, goals, interests, or values.

While the degree of alignment with Common Core standards is encouraging, Dysarz concludes, there's clearly a lot of room for improvement, and daily assignments are where the rubber meets the road. He identifies these imperatives:

- Raising expectations for low-income students and students of color;
- Increasing the level of cognitive demand in all classes, from accelerated to remedial;
- Striking a better balance among procedural skills, fluency, conceptual understanding, and applications;
- Making greater use of multiple representations to build conceptual understanding;
- Getting students to communicate their mathematical understanding and explain and justify their answers and critique the reasoning of others;
- Giving students choices and having them bring their own ideas, experiences, and opinions into math classrooms.

"Checking In: Are Math Assignments Measuring Up?" by Keith Dysarz, The Education Trust, April 4, 2018, https://edtrust.org/resource/checking-math-assignments-measuring/; Dysarz can be reached at kdysarz@edtrust.org; for an earlier Education Trust report by Sonja Santelises and Joan Dabrowski on middle-school ELA assignments, see https://bit.ly/2AGaLOR, summarized in Memo 602, with a follow-up by Joan Dabrowski summarized in Memo 638.

Teaching Persuasion and Argumentation

In this article in *American Educator*, Linda Friedrich, Rachel Bear, and Tom Fox (National Writing Project) share their program for developing persuasive writing, which they sum up as *dialogue, not debate*. "Participating in a conversation is central to our understanding of argument," say Friedrich, Bear, and Fox. "Before students develop a solid claim for an argument, they need to get a good sense of what the range of credible voices are saying and what a variety of positions are around the topic… Readers recognize a thoughtful argument when it's clear that the writer deeply understands the conversation around the issue, carefully engages a range of viewpoints, and skillfully handles the evidence with commentary that advances the claim."

The National Writing Project's 45-hour College, Career, and Community Writers Program (C3WP) for grade 4-12 teachers, implemented in schools in 41 states, is built on these principles:

- Focus on a specific set of skills or practices in argument writing that build over the course of an academic year. These include organizing evidence and responding to opposing viewpoints.
- Provide text sets that represent multiple perspectives on a topic, beyond pro and con, with a range of positions, information modes, genres, and perspectives, using videos, images, written texts, infographics, data, and interviews.
- Use iterative reading and writing practices that build knowledge about a topic. These might include interviewing community members, doing detailed research, and beginning to craft their claims.

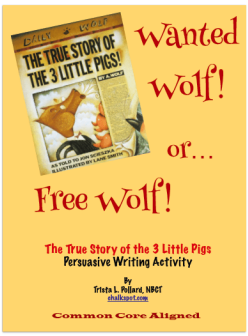
- Support the recursive development of claims that emerge through reading and writing. These are manifest as students gather information from text, consider multiple angles on a topic, develop and revise a claim, and write a full draft.
- Help students organize and structure their writing to advance an argument. Have students read exemplary op-ed articles, thinking through the decisions the writers made and how they organized their sources. A key takeaway: there isn't one right way to write a persuasive piece.
- Embed formative assessments to identify areas of strength and inform next steps for teaching and learning. Especially important are one-on-one conferences with students to focus, encourage, tweak, and if necessary redirect their efforts.

"For the Sake of Argument: An Approach to Teaching Evidence-Based Writing" by Linda Friedrich, Rachel Bear, and Tom Fox in American Educator, Spring 2018 (Vol. 42, #1, p. 18-22, 40), https://www.aft.org/ae/spring2018/friedrich_bear_fox

Mixing Things Up with Student Writing Assignments

In this article in *AMLE Magazine*, teacher/author/consultant Lauren Porosoff says teachers should go beyond the time-honored triumvirate of writing conventions: persuasion, information, and narrative. Here are her suggestions:

❖ ***Persuasion: From "I believe" to "We believe"*** – Instead of asking students to stake out and defend one point of view in response to a prompt (for example, Should students have assigned seats in the cafeteria?), how about asking students to identify common values among those who would argue for and against that position? Have them think about why their peers, teachers, and parents care about lunch seating. By doing this, students might realize that both sides have a common interest: sitting with friends, feeling connected, and eating a relaxed, nourishing lunch. "A good argument acknowledges alternative views," says Porosoff, "but dismisses or qualifies them to advance the writer's own view. But students writing to unify would introduce multiple perspectives, not to assert which one is 'right' or 'best,' but to discover what the people holding these perspectives have in common, and to suggest ways they could work together and move forward."



❖ ***Information: From "What I know" to "What can I learn?"*** – The standard informational essay (for example, Compare tree frogs and bromeliads as symbiotic organisms) has a dreary sameness, often presented in five-paragraph essay format: describing the tree frog and bromeliad, then explaining how the latter affects the former, then saying why symbiotic relationships matter. Imagine, as an alternative, having students ask questions about the relationship between two symbiotic organisms. Some possibilities:

- How do the frogs and bromeliads find each other?
- Do other kinds of frogs have symbiotic relationships with plants?
- Do they need each other?
- What could people learn from the tree frog? From the bromeliad? From the relationship between them?
- Does the symbiosis occur only under certain conditions?
- Will climate change influence this relationship? Or will the symbiotic relationship help them survive and adapt as the climate changes?
- How can humans survive and adapt as the climate changes?
- What can we learn from the frog-bromeliad relationship?

"Questions might engender more questions in ways we don't anticipate or understand," says Porosoff. "I doubt the classic five-paragraph structure will lend itself to the rambling, associative, creative, and curious writing-to-ask prompt."

❖ ***Narrative: From "Here's my story" to "Please tell your story"*** – In most narrative writing assignments (for example, Tell about a time you showed courage), we're asking students to privilege their own perspective. What about asking students to tell their own stories and invite others to tell *theirs*? They might write to a grandparent who survived a war, or a classmate who spoke in front of a large audience, or a teacher who took a job in a foreign country, respectfully asking them to share their experiences. They might even write to imaginary fictional characters and imagine the responses.

WELCOME BACK

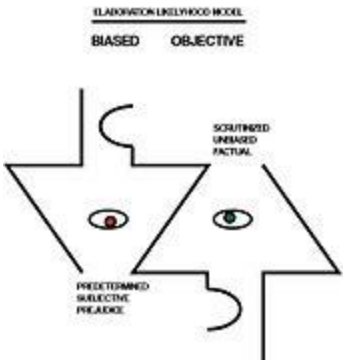
Traditional persuasion/informational/narrative writing assignments encourage students to be closed, certain, authoritative, and self-focused, concludes Porosoff. The type of assignments she's advocating encourage students to be open, curious, humble, and empathetic.

"Moving from Telling Our Stories to Inviting Stories" by Lauren Porosoff in AMLE Magazine, April 2018 (Vol. 6, #2, p. 6-9), https://bit.ly/2GKojME; Porosoff is at lporosoff@ecfs.org.

A Four-Stage Process to Get High-School Students Writing Well

(Originally titled "Giving Students the Right Kind of Writing Practice")

In this article in *Educational Leadership*, teacher/authors Kelly Gallagher and Penny Kittle describe the pacing-guide-driven approach to writing used in many schools: a narrative essay in the first quarter, an argument essay in the second, and so on. "We reject this approach," sat Gallagher and Kittle. "Writing four major essays simply doesn't offer enough time immersed in the art of crafting words and sentences. Improvement in writing is grounded in practice, in getting words on the page – lots of them. There are no shortcuts." Some schools have students write more frequently, perhaps an essay a month, but if students are required to use the same five-paragraph format every time, they'll have little chance to develop fluency, voice, and agency.



Gallagher and Kittle read up on Jerome Bruner's theory of the spiral curriculum and designed a narrative writing unit to get their students revisiting the genre multiple times, each time with increasing complexity and challenge. Students got a road map of the stages up front and then dove in, with Gallagher's students in California and Kittle's in New Hampshire communicating and sharing throughout the unit:

• ***Reading several short memoirs*** (one week) – Students read a poem by Billy Collins ("On Turning Ten") and stories by other authors and jotted notes about memories evoked by the authors. The teachers did the same, modeling the messiness and creativity of writing. Students generated a lot of story possibilities in their notebooks, zoomed in on details, and used all their senses to describe people, places, and events. After several days of reading and jotting, students selected one idea and wrote a 100-word memoir focusing on two skills: using sensory details and choosing strong verbs to evoke images.

• ***Writing one scene*** (one week) – The teachers used several mentor texts to show how different authors write a scene. Then students chose a moment in their emerging story and wrote about it, using specific, sensory detail to slow down action, used dialogue to develop characters and situations, and worked on a strong narrative voice.

• ***Crafting several scenes to tell a story*** (three weeks) – The teachers taught several mini-lessons on different authors' stories and specific craft elements, then had students write a series of scenes, conferencing with them as they wrote. The teachers' injunctions: Develop your story around an idea, a place, or a quality (like courage). Organize scenes to create momentum. Create effective transitions to link scenes and bring cohesion. Engage readers with a dynamic lead sentence. Write an effective ending to show why the story matters. Work on word choice and tone and develop the narrator's voice. Proofread, edit, and polish as you write. "We have students notice how a scene can either slow down time or build momentum," say Gallagher and Kittle, "and we note how dialogue reveals character through what is said – or not said."

• ***Differentiated support*** (three weeks) – Some students further developed their stories seen through the lens of multiple narrators, while others continued working on their scenes and closings. The teachers' injunctions: Develop a voice for each narrator. Recognize your power as a writer to change thanking. Experiment with literary devices to develop your ideas, your setting, and your characters. Use different points of view to deepen thinking about the ideas in your story. Organize scenes to create momentum in the plot, smoothly transitioning between narrators and events. Conclude with a new understanding of the big idea. Read your writing aloud, hearing how it works. Spot errors in sentence structure and eliminate them.

"Educators guide students toward independence," say Gallagher and Kittle, "when they focus their teaching on the deliberate progression of skills, coupled with an expectation that students will make their own decisions about the organization of

their writing." Why start with narrative? "[B]ecause students have stories to tell and we value these stories. When students' voices are heard, they more readily engage in the hard work. This is not task-oriented writing, where students dutifully answer a mandated prompt. We seek their individual voices and come to know them as they write several stories in this unit. Students build confidence as writers because they have the opportunity to revisit and to practice the same skills over time."

"Giving Students the Right Kind of Writing Practice" by Kelly Gallagher and Penny Kittle in Educational Leadership, April 2018 (Vol. 75, #7, p. 14-20), https://bit.ly/2qBtAAa; the authors can be reached at kellygallagher@cox.net and pennykittle@me.com. They are the co-authors of *180 Days: Two Teachers and the Quest to Engage and Empower Adolescents* (Heinemann, 2018)

Mike Schmoker on Writing Across the Curriculum

(Originally titled "Demystifying Writing, Transforming Education")

In this article in *Educational Leadership*, author/consultant Mike Schmoker says that having students write across subject areas, if accompanied with lots of reading and discussion, could have more impact on college and career success than any other practice. His argument:

- ***The powerful impact of writing*** – "Decades of research attest to writing's unrivaled ability to facilitate understanding and help people evaluate, reconstitute, and synthesize knowledge," says Schmoker. "Writing enables students to generate their best thinking in its most effective form." That's why, when business and industry hire new workers, they look for writing skills over managerial skills.
- ***What works in classrooms*** – Content-area writing is basically "thinking on paper," says Schmoker. Students need to:
  - Read texts (or examine data), underlining, annotating, or taking notes;
  - Zero in on the notes, quotes, or underlined passages that are central to their analysis;
  - Write to explore, clarify, or explain how these portions support the student's arguments, observations, or interpretations.
  - Do this kind of writing (as short as a paragraph, as long as a term paper) on a regular basis – every week, and at the end of every unit.

Frequent, text-based argumentative writing is the best way to put students on the path to long-term success.

- ***Prompts to promote higher-order thinking*** – Here are some writing prompts that help students make coherent arguments:
  - Evaluate the credibility of a scientific theory, a mathematical solution, a politician…
  - Explain why you agree (or disagree) with a fictional or historical character...
  - Analyze/interpret/debunk a math or science model or data table, a work of fiction…
  - Compare and contrast two musicians, artists, mathematical arguments, works of drama…
  - Make recommendations or propose solutions for some real-world quantitative problem or social/environmental problem…

"I can tell you from experience and observation that students find such questions and prompts highly engaging," says Schmoker. "They activate the intellect and lend purpose to learning in every discipline – including math, where writing is essential but grossly underutilized."

- ***Not letting grading discourage frequent writing*** – "Individually correcting errors on student papers is among the least efficient uses of a teacher's time," says Schmoker. "The most powerful, time-efficient way to improve students' writing is through focused, whole-class instruction. Teachers should model one aspect of writing, with each step followed by student practice, during which the teacher observes (and addresses) whole-class patterns of progress or need on that writing skill." Repeating this cycle of instruction, practice, and feedback through a lesson, anchored by examples of good writing displayed on a document camera, "guarantees better writing," says Schmoker – with the teacher grading only a few student writing products.

"Demystifying Writing, Transforming Education" by Mike Schmoker in Educational Leadership, April 2018 (Vol. 75, #7, p. 22-27), https://bit.ly/2H5JoBY; Schmoker can be reached at schmoker@futureone.com.

Overcoming Obstacles to Effective Writing Instruction

(Originally "Six Roadblocks to Writing Instruction – and How to Find Alternative Routes")

"Obstacles abound on the road traveled by writers and their writing teachers," says Brian Kissel (University of North Carolina/ Charlotte) in this article in *Educational Leadership*. State mandates, national standards, high-stakes assessments, and some time-honored classroom practices can undermine good teaching. Kissel names six problematic practices and how teachers and administrators can address them:

- ***Lack of time and scripted writing programs*** – Students' needs, not packaged programs and pacing guides, should drive instructional decision-making and time allocation. "Prescribed curricula typically provide interesting lesson ideas to use in the classroom," says Kissel. "However, as students craft text and teachers confer with them, future lessons should be adapted based on what writers need rather than the next prescribed lesson… This does not mean teachers linger forever. They still need to set deadlines for published products and, as much as possible, push students to meet those deadlines."
- ***One teacher planning writing lessons for an entire grade-level team*** – This strategy seems efficient, says Kissel, "But we cannot plan lessons for students we do not teach; doing so means student voices are stripped from our instructional decision-making." Better for teachers to plan their own lessons and then bring student writing to team meetings to talk about students' goals, habits, and processes and learn from colleagues' successes and struggles.
- ***Dictating the topics students write about*** – Kissel believes this common practice does for students what they should be doing for themselves. It also silences stories that students feel compelled to tell. He was not happy when his daughter's first-grade teacher allowed her to write and illustrate a 20-page book about lipstick, blush, and other beauty products. While Kissel would have preferred his daughter's "passions to lean more toward brains than beauty, I'm glad she found a topic that ignited her writer's soul."
- ***Making the writing process too formulaic*** – As a first-year teacher, Kissel had his students plan their writing on Monday, draft on Tuesday, revise on Wednesday, edit on Thursday, publish on Friday, and take their finished pieces home for the weekend. "I expected my students to proceed through the 'steps' at the same time – neglecting to allow them any choice in the process. My ignorance came from not being a writer myself. I didn't understand that writers work through their own processes, processes that are different for each writer and often for each new piece of writing." After taking Writers' Workshop training, Kissel moved to a much more organic process and started drafting, revising, and editing his own writing in front of his students, thinking out loud about all his decisions.
- ***Teachers as the sole evaluators of student writing*** – Kissel remembers a college writing teacher who provided minimal feedback on weekly writing assignments and gave almost all papers Cs based on a mysterious set of criteria. When Kissel became a teacher, he made a point of having students attach a rubric-based self-evaluation to each paper they submitted. "Everyone benefits from having a seat at the assessment table," he says. "Students benefit by having a voice in the process. Teachers benefit by better understanding the decisions students made as writers."
- ***Students focusing only on grades*** – "When writers write for audiences and purposes bigger than school," says Kissel, "they start to take pride in their work. They begin to see how their words are more powerful than whatever grade they earn in the class." In his writing conferences, he asks students, "Who are you writing this for?" and "Why are you writing it?"

"Six Roadblocks to Writing Instruction – and How to Find Alternative Routes" by Brian Kissel in Educational Leadership, April 2018 (Vol. 75, #7, online only), https://bit.ly/2JLU2z4; Kissel can be reached at btkissel@uncc.edu.

WELCOME BACK

The Multiple Roles of Instructional Coaches

In this article in *Tools for Learning Schools*, Joellen Killion and Cindy Harrison describe ten ways instructional coaches can improve student learning by providing direct support to teachers. "Naming the roles gives everyone a common language with which to consider the work of coaches," say Killion and Harrison. "Juggling the demands of multiple roles and responsibilities; different individual teacher needs, goals, learning preferences, and personalities; classroom dynamics, daily schedules, and diverse curricula can be taxing. Coaches need to be flexible, yet consistent." Here are the roles to be prioritized and planned according to each school's needs:

- **Resource provider:**
  - Expanding teachers' use of a variety of resources;
  - Gathering materials and articles;
  - Getting examples of best practice;
  - Recommending resource sites.
- **Data coach:**
  - Supporting the use of student work and assessment results to improve instruction;
  - Facilitating conversations that drive decisions in classrooms and teams;
  - Identifying classroom, grade-level, and schoolwide trends.
- **Instructional specialist:**
  - Helping teachers choose the most effective practices to deliver content;
  - Aligning curriculum and instruction to meet the needs of all students;
  - Supporting differentiation.
- **Curriculum specialist:**
  - Helping teachers unpack and prioritize required curriculum standards and materials;
  - Aligning the written, taught, and tested curriculum;
  - Establishing realistic pacing guides;
  - Deepening teachers' content knowledge and integrating different curriculum areas.
- **Classroom supporter:**
  - Co-planning and co-teaching lessons;
  - Modeling effective instructional strategies;
  - Observing, giving feedback, and fostering reflection.
- **Learning facilitator:**
  - Designing and facilitating effective professional development for teachers;
  - Facilitating study groups, lesson study, looking at student work, and co-visitations.
- **Mentor:**
  - Organizing schoolwide induction activities;
  - Helping with "new-to-teaching" and "new-to-the-school" issues;
  - Supporting effective classroom management.

- **Member of the school's leadership team:**
  - Working with formal and informal leaders to plan, implement, and assess school initiatives;
  - Joining Learning Walk teams to monitor the implementation of best practices;
  - Serving as another set of eyes for the principal on change initiatives;
  - Coordinating the services of coaches and other resource personnel;
  - Aligning individual teacher goals with school goals.
- **Catalyst for change:**
  - Asking hard questions about current practices when they aren't effective;
  - Introducing alternatives and refinements;
  - Supporting teachers as they make changes.
- **Learner:**
  - Continuously updating their own professional repertoire;
  - Modeling the attitudes and behaviors teachers need to be successful;
  - Modeling continuous learning and serving as a thought leader in the school;
  - Advocating for their own and mentees' learning opportunities.

"Coaches' Multiple Roles Support Teaching and Learning" by Joellen Killion and Cindy Harrison in Tools for Learning Schools, Winter 2018 (Vol. 21, #1, p. 1-3, 5-9, 15-18),
no e-link available