



Educator Update – January 2023

Keeping Huron County Educators Informed

This Educator Update includes the following:

- 1. Top 10 Research Studies of 2022 from Edutopia**
 - 2. Podcast Recommendation: Sold a Story from APM**
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1. The 10 Most Significant Education Studies of 2022

By [Youki Terada](#), [Stephen Merrill](#), December 7, 2022, downloaded from Edutopia
<https://www.edutopia.org/article/the-10-most-significant-education-studies-of-2022/>

In Edutopia's annual ritual, we pored over hundreds of educational studies and pulled out the most impactful—from a new study on the sneaky power of sketchnotes to research that linked relationships and rigor.

This past year didn't feel normal, exactly, but compared with the last few trips around the sun, well—it sufficed. In 2021, when we sat down to write our annual edition of the research highlights, we were in the throes of postpandemic recovery and wrote about the impact of a grueling year in which burnout and issues of mental and physical health affected educators everywhere.

This year, we crossed our fingers and turned to best practices once again, reviewing hundreds of studies to identify the most impactful and insightful educational strategies we could find.

What turned up?

Education Research You Can Use

We found evidence that sheds new light on the misunderstood power of brain breaks, took a close look at research that finds a surprising—even counterintuitive—rationale for teachers to focus on relationships, and located both the humor and the merit in asking kids to slither like a snake as they learn about the “sss” sound of the letter S.

All that, and a lot more too, in our once-a-year roundup that follows.

1. There's No Conflict Between Relationships and Rigor

Observers sometimes assume that teachers who radiate empathy, kindness, and openness are “soft” and can be taken advantage of by students. But new research shows that when you signal that you care about kids, they're willing to go the extra mile, giving you the flexibility to assign more challenging school work.

That's the main takeaway from a [2022 study](#) that examined teaching practices in 285 districts, comparing relationship-building strategies with the flexibility that teachers had in assigning challenging and complex work. The researchers found that the most effective teachers build their classrooms by getting to know their students, being approachable, and showing that they enjoy the work—and then deftly translate emotional capital into academic capital.

“When students feel teachers care about them, they work harder, engage in more challenging academic activities, behave more appropriately for the school environment, are genuinely happy to see their teacher, and meet or exceed their teacher's expectations,” the researchers conclude.

2. Highlighting Isn't Very Effective Until Teachers Step In

Students often highlight the wrong information and may rely on their deficient highlighting skills as a primary study strategy, leading to poor learning outcomes, a [new analysis](#) of 36 studies suggests. As little as two hours of tutoring, however, can dramatically improve their capabilities.

The researchers determined that “learner-generated highlighting” tended to improve retention of material, but not comprehension. When students were taught proper highlighting techniques by teachers, however—for example, how to distinguish main ideas from supporting ideas—they dramatically improved their academic performance. Crucially, “when highlighting is used in conjunction with another learning strategy” like “graphic organizers or post-questions,” its effectiveness soars, the researchers said.

The need for explicit teaching may be linked to changing reading habits as students graduate from stories and fables to expository texts, which require them to navigate unfamiliar text formats, the researchers note. To bring kids up to speed, show them “examples of appropriate and inappropriate highlighting,” teach them to “highlight content relatively sparingly,” and provide examples of follow-on tactics like summarizing their insights to drive deeper comprehension.

3. A Landmark Study Strikes a Resounding Note for Inclusion

When the Individuals with Disabilities Education Act called for greater inclusion—mandating that students with disabilities receive support in the “least restrictive environment”—one goal was to ensure that educational accommodations didn't interfere with the students' social and emotional development in classrooms full of their peers. The law also confronted age-old prejudices and established a binding legal obligation in favor of inclusion.

But thus far, rigorous evidence of the academic benefits has been thin.

Now a [new large-scale study](#) appears to put the matter beyond dispute. When researchers tracked nearly 24,000 adolescents who qualified for special education, they discovered that spending a majority of the day—at least 80 percent—in general education classes improved reading scores by a whopping 24 points and math scores by 18 points, compared with scores of their more isolated peers with similar disabilities.

“Treat the general education classroom as the default classroom,” the researchers firmly state, and push for separate accommodations only when all other options have been exhausted.

4. Sketchnotes and Concept Maps Work—Even Better Than You Might Think

Simple concept maps, sketchnotes, and other annotated jottings—akin to doodling with a purpose—can facilitate deeper comprehension of materials than more polished drawings, a [new study](#) finds.

Representational drawings, such as a simple diagram of a cell, may help students remember factual information, the researchers explain, but they “lack features to make generalizations or inferences based on that information.” Organizational drawings that link concepts with arrows, annotations, and other relational markings give students a clearer sense of the big picture, allow them to visualize how ideas are connected, and provide a method for spotting obvious gaps in their understanding. On tests of higher-order thinking, fifth graders who made organizational drawings outperformed their peers who tried representational drawings by 300 percent.

To reap the benefits in class, have students start with simple diagrams to help remember the material, and then move them up to sketchnotes and concept maps as they tease out connections to prior knowledge.

5. Brain Breaks Are Misunderstood (and Underutilized)

Conventional wisdom holds that the development of a skill comes from active, repeated practice: It's the act of dribbling a basketball that ultimately teaches the basketball star.

But recent studies reveal that the intervals between practice sessions are at least as crucial. In 2021, [researchers used brain scans](#) to observe neural networks as young adults learned how to type. During breaks, the brains of the participants appeared to head back to the keyboards, unconsciously replaying the typing sequences over and over again at high rates of speed as they flipped the material between processing and memory centers dozens of times in the span of 10 seconds. The researchers concluded that brain breaks play “just as important a role as practice in learning a new skill.”

In 2022, we learned that the kinds of breaks make a difference, too. [One study](#) compared in-classroom breaks like drawing or building puzzles with outdoor breaks like running or playing in sandboxes. In a nod to the power of movement—and free time—it was the kids playing outside who returned to class ready to learn, probably because indoor games, like indoor voices, required children to engage in more self-regulation, the researchers speculated. Meanwhile, an [analysis examining “green breaks”](#)—brief strolls in a park or visits to a school garden—concluded that students who partook in the activities performed better on tests of attention and working memory.

Depriving kids of regular breaks, it turns out, is a threat to the whole proposition of learning. To commit lessons to memory, the brain demands its own time—which it sets aside to clean up and consolidate new material.

6. On Classroom Design, an Argument for Caution—and Common Sense

When it comes time to decorate their classrooms, teachers often find themselves on the horns of a dilemma: Should they aim for Pinterest-worthy interior design or opt for blank walls on the strength of research that emphasizes the risks of distracting students?

A [study](#) published in February this year argues for minimalism. Researchers tracked the on-task behavior of K–2 students and concluded that visually "streamlined" classrooms produced more focused students than "decorated" ones. During short read-alouds about topics like rainbows and plate tectonics, for example, young kids in classrooms free of "charts, posters, and manipulatives" were paying attention at significantly higher rates.

But it might not be a simple question of more or less. A [2014 study](#) confirmed that posters of women scientists or diverse historical figures, for example, can improve students' sense of belonging. And a [recent study](#) that observed 3,766 children in 153 schools concluded that classrooms that occupied a visual middle ground—neither too cluttered nor too austere—produced the best academic outcomes. A [2022 study](#) reached similar conclusions.

Classroom decoration can alter academic trajectories, the research suggests, but the task shouldn't stress teachers out. The rules appear to be relatively straightforward: Hang academically relevant, supportive work on the walls, and avoid the extremes—working within the broad constraints suggested by common sense and moderation.

7. For Young Children, the Power of Play-Based Learning

Children aren't miniature adults, but a bias toward adult perspectives of childhood, with its attendant schedules and routines, has gradually exerted a stranglehold on our educational system nonetheless, suggests the author and early childhood educator Erika Christakis.

How can we let little kids be little while meeting the academic expectations of typical schools? A [new analysis of 39 studies](#) spanning several decades plots a middle path for educators, highlighting the way that play gently guided by adults, often called play-based learning, can satisfy both objectives.

Teachers of young students can have a "learning goal" in mind, but true play-based learning should incorporate wonder and exploration, be child-led when possible, and give students "freedom and choice over their actions and play behavior," the researchers assert. Interrupt the flow of learning only when necessary: gently nudge students who might find activities too hard or too easy, for example. The playful approach improved early math and task-switching skills, compared with more traditional tactics that emphasize the explicit acquisition of skills, researchers concluded.

To get the pedagogy right, focus on relationships and ask questions that prompt wonder. "Rich, open-ended conversation is critical," Christakis told Edutopia in a [2019 interview](#)—children need time "to converse with each other playfully, to tell a rambling story to an adult, to listen to high-quality literature and ask meaningful questions."

8. A Better Way to Learn Your ABCs

Getting young kids to match a letter to its corresponding sound is a first-order reading skill. To help students grasp that the letter c makes the plosive "cuh" sound in *car*, teachers often use pictures as scaffolds or have children write the letter repeatedly while making its sound.

A [new study](#) suggests that sound-letter pairs are learned much more effectively when whole-body movements are integrated into lessons. Five- and 6-year-olds in the study spent eight weeks practicing movements for each letter of the alphabet, slithering like a snake as they hissed the sibilant "sss" sound, for example. The researchers found that whole-body movement improved students' ability to recall letter-sound pairings and doubled their ability to recognize hard-to-learn sounds—such as the difference between the sounds that c makes in *cat* and

sauce—when compared with students who simply wrote and spoke letter-sound pairings at their desks.

The approach can make a big difference in the acquisition of a life-changing skill. Educators should “incorporate movement-based teaching” into their curricula, giving special consideration to “whole-body movement,” the researchers conclude.

9. Why Learners Push the Pause Button

Some of the benefits of videotaped lessons are so self-evident that they hide in plain sight.

When teaching students foundational concepts, a video lesson equipped with a simple pause button, for example, may allow students to reset cognitively as they reach their attentional limits, a [2022 study](#) concluded. Pause buttons, like rewind buttons, are also crucial for learners who encounter “complex learning materials,” have “low prior knowledge,” or exhibit “low working memory capacities.”

Increasingly, the intrinsic value of targeted video lessons is borne out in research. In a [feature on Edutopia](#), we looked at research suggesting that video learning supported self-pacing and [flexible, 24/7 access](#) to lessons; that questions embedded in videos improved academic performance, increased note-taking, and reduced stress (see these [2015](#) and [2020](#) studies); and that video versions of lectures tended to “make [content more coherent](#)” to students.

To modernize their classrooms, teachers might record their most important lessons and make them available to students as study aids so they can pause, rewind, and review to their hearts' content.

10. An Authoritative Study of Two High-Impact Learning Strategies

Spacing and retrieval practices are two of the most effective ways to drive long-term retention, confirms an [authoritative 2022](#) review spanning hundreds of studies on the topic—and students should know how and why the strategies are effective.

In the review, researchers explain that students who prefer techniques like reading and rereading material in intense cram sessions are bound to fail. Instead, students should think of learning as a kind of “fitness routine” during which they practice recalling the material from memory and space out their learning sessions over time. Teaching kids to self-quiz or summarize from memory—and then try it again—is the crucial first step in disabusing students of their “false beliefs about learning.”

The effect sizes are hard to ignore. In a [2015 study](#), for example, third-grade students who studied a lesson about the sun and then reread the same material scored 53 percent on a follow-up test, the equivalent of a failing grade, while their peers who studied it once and then answered practice questions breezed by with an 87 percent score. And in a [2021 study](#), middle school students who solved a dozen math problems spread out across three weeks scored 21 percentage points higher on a follow-up math test than students who solved all 12 problems on the same day.

2. Sold a Story

If you teach elementary, work with older students who are bright but poor readers, if you are a parent/grandparent, or if you just CARE about improving literacy outcomes for students, this Podcast is definitely worth your time. This Podcast by American Public Media is a six-part series. <https://features.apmreports.org/sold-a-story/>

3. Data Review for Local Schools



HISD Professional Development

Data Review for Schools

Date(s)	Tuesday, February 7, 2023
Time	3:30 – 7:00 p.m., light meal included
Location	Huron Intermediate School District Administrative Offices 1299 S. Thomas Road, Bad Axe, MI 48413
Cost	No Cost for Huron County Schools
Credit	3 State Continuing Education Clock Hours (SCECH) pending approval
Stipend	Stipends of \$50 paid to participants
Presenter(s)	Facilitated by the HISD Data Review Team
Audience	Administrators, Teachers, Interventionists, School Improvement Team
Description	<p>Do you miss the Student Achievement Model (SAM) sessions of the past where you were guided to look at your data? Are you wondering if you're missing critical components of MDE's Continuous Improvement Plan (MICIP) Process? Have you painted a less-than-Whole-Child view with your data?</p> <p>If so, bring a team and spend a few hours delving into your data, digging for underlying causes for gaps, and investigating intervention options. We will create a basic data packet with your school's EWI charts and the School Index report from MISchoolData. You are welcome to bring additional local data as well, such as NWEA or Star; you can bring your own laptop or use ours to look up public data.</p>
Registration	Deadline to register is Wednesday, February 1. Register online at www.huronisd.org Professional Development link.
Questions	Contact Vicky Erdman at (989) 269-6406 with registration questions. Contact Karen Currie at curriekm@huronisd.org regarding content.

*Federal funds not used for meal costs