

# EWA 77<sup>TH</sup> NATIONAL SEMINAR

## Covering Math Story Ideas

Here are some story ideas from our three panelists.

### Jo Napolitano, The 74

**Survey stories.** If I were a local or regional reporter, as I was when I lived on the border of Mexico in the early 2000s and again when I worked for the Chicago Tribune, I'd start with a few survey stories.

- **Access to middle school Algebra** I'd find out whether my local middle schools offer Algebra in the 8th grade.
- **Access to calculus in high school** Then, I'd do the same with 12th grade calculus. Both reflect districts' offerings in advanced math, which can set students up for success in college and beyond.
- **Math pass rates.** I'd examine math pass rates at the middle and high school level for every cohort of students with an eye on Black, Hispanic, ESL and underprivileged kids – this might be your annual, state test score results story.
- **Remedial math enrollment at the college level.** I'd contact my local colleges to see how many students are taking remedial math – and whether this number has gone up or down post-pandemic. I'd also try to find out exactly who is taking these courses if such demographic data is captured by the colleges. I would also ask colleges whether they are in regular communication with local high schools to address any disparities there.
- **Gifted and Talented programs' math offerings.** What are their math offerings? At what grade level? Who is participating? How are those students identified?

**Improvement of math offerings.** Contact The Dana Center in Austin, which is working with roughly two dozen states across the country to improve math offerings, bringing

high schools and colleges together to work on these issues. The Dana Center is a great place for story ideas in general.

**Local schools superintendents and principals' attitudes toward math.** A simple idea that will yield great results is to ask school superintendents or principals their greatest worries about math – and also their greatest recent successes in that topic.

### **Melodie Baker, Just Equations**

**Student interest in statistics and data science.** There is a growing student interest in statistics and data science. Between 2009 and 2019 statistics surpassed calculus course taking: More high school graduates now have statistics on their transcripts than calculus. (This comes amid growing concern that students aren't learning enough statistics – see [EdWeek](#)). What does this mean for math achievement and college opportunity?

**Inconsistent access to learning math in middle school.** Some middle school students get 22 minutes of math instruction each day. Others get 90 minutes of math. Time allocated to learning math in 6th, 7th and 8th grade by schools or districts is a huge equity issue. Research in NYC revealed that there are no minimum requirements for math learning in some grades. Schools in mostly Black and Brown communities are less likely to have more time dedicated to math.

**What to do about Algebra II?** The course has long been considered a benchmark for college readiness. Since Algebra II is a stepping stone to calculus, there seems to be no clear answer to the role it should play in high school, especially when other courses such as statistics and data science, are growing in importance. Some states are pulling Algebra II off their high school graduation requirement list while others are adding it back in. What are the pros and cons? (Note: According to a forthcoming Just Equations report, only 17 states plus D.C. treat Algebra II a graduation requirement for all students, and eight of those states allow exceptions).

**SAT and math.** Some selective institutions have announced a return to SAT testing. Underserved students are less likely to have access to advanced math courses that could enhance their transcripts and boost their scores. Furthermore, the test expectation and the recent SCOTUS decision on affirmative action can send the message to underrepresented students that they aren't welcome at selective institutions. Given that race and income are highly predictive of SAT scores, what are these colleges doing to address equitable access?

**Access and outcomes in advanced math.** Exploring differences in outcomes and access to advanced math for school districts that have implemented automatic

acceleration strategies compared to those that do not guarantee acceleration to students who meet benchmarks.

### **Sharon Lurye, Associated Press**

**Lack of teacher prep:** So many problems in education stem from the training – or lack of training – that teachers get before they enter a classroom. Many math teachers were actually trained in specialties other than math, and never got thorough training. Talk to local teachers colleges: what percent of students specialize in math as opposed to other subjects or general education? How many courses are they required to take that are specifically about math? Ask teachers in your area: what kind of training did you get specifically about math instruction?

**Who is making math fun?** Stories about math should not be a drag. Ask school leaders in your area, who is a teacher in the district who is doing something innovative and fun? Profile them! In particular, it's fun to write about math games and how families can help their kids learn to love math. Here's a [TikTok](#) my team made as an example.

**Find the solution:** AL.com has done great work showing how some districts in Alabama have made incredible progress in math thanks to the help of [math coaches](#), a more data-driven approach, and [more class time](#), leading to impressive gains in test scores [even during the pandemic](#) and for marginalized student groups. Has your state passed any legislation that specifically targets how math is taught? Did schools in your area use pandemic-era funding for math tutoring, and if so, what were the results?

**Building Thinking Classrooms: Math Revolution or Just a Fad?** A [new movement](#) is sweeping math classrooms across the country, based on a book by Peter Liljedahl, that emphasizes student-led collaboration and creative thinking in the math classroom. Some educators say [you must read this book](#), others dismiss it as another [fad](#) with [weak evidence](#), much like how “balanced literacy” once took over reading classes. Are teachers in your area using this method for teaching math? What are the results?

**AI in math: Helpful or Hype?** Math is a topic that's ripe for ed-tech solutions and many companies are starting to hype up the possibility of AI tutors. AI offers the possibility of incredible personalization for students, but companies' claims can often be wildly overhyped. Large language models like ChatGPT are not actually good at math, because they're designed to mimic language, not perform actual calculations. The Wall Street Journal found that one AI math tutor from Khan Academy gave wrong answers for [basic subtraction problems](#). Find math teachers in your area who are experimenting with AI and ask them what impact it has in the classroom. Test the tech yourself to see if it works.

**Equity of course offerings:** The Office of Civil Rights (OCR) collects detailed data on which kids get access to advanced math classes. They found that [fewer than half of Black students have access to a full range of math and science courses in high school](#), compared to 55% of whites and 69% of Asians. Only 35% of schools with high enrollments of Black/Latino students offer calculus, compared to 54% of schools with low enrollment of these students. The National Assessment of Educational Progress (NAEP) also [found](#) that over 40% of Asian students in 2019 took calculus by the time they graduated, compared to just *six* percent of Black students. Use data from the OCR to look up schools in your region and see what courses they offer.

**Databases and useful resources:**

- [The Dana Center at UT Austin](#)
- [Just Equations](#)
- [RAND American Mathematics Educator Study](#)
- U.S. Department of Education Office of Civil Rights Data Collection: <https://civilrightsdata.ed.gov/>
- The Nation's Report Card: <https://nces.ed.gov/nationsreportcard/>
  - Math scores on the NAEP can be found by [state](#) and select [school districts](#)
  - The [High School Transcript Study](#) examines math/science coursetaking
- The National Center for Education Statistics has data on what share of 9th-graders in fall 2022 were in [different types of math courses](#) (pre-algebra, algebra, geometry, etc.) and [how 9th-grade math scores](#) differ by race, sex, language, growth mindset, and other factors.