

MERGING MATH AND CIVICS

Forging a Critical New Emphasis on U.S. Students' Democratic Participation

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Executive summary

Motivation

Democracy depends on mathematics: tallying votes, apportioning legislative seats, and drawing districts are just a few fundamentally mathematical democratic processes. The math-based choices we make about our democracy—plurality or ranked choice voting, single-winner districts or proportional representation, electoral or popular vote to elect the president—can lead to dramatically different outcomes. Yet U.S. K–12 schools teach math and civics as separate subjects, minimizing attention to the interdisciplinary space where the two meet. This gap matters more than ever, with nearly 80% of Americans believing divisiveness is threatening democracy. We designed our study to learn educators’ perspectives on the potential for K-12 students to learn the mathematical foundations of democracy through an interdisciplinary instructional approach we call “the math of civics” (“math-civics” as shorthand in this report).

Design

In Stage One of our project (fall 2025–summer 2026), we conducted interviews and focus groups with 123 educators and curriculum providers across six states (California, Florida, Illinois, Massachusetts, New York, and Texas). Participants included teachers (n=59), school leaders (n=30), district leaders (n=11), state education leaders (n=6), and curriculum providers (n=17; 11 math and 6 civics). Teachers spanned elementary, middle, and high school and taught math or civics/social studies courses. We engaged participants in 30-minute one-on-one interviews or 60-minute focus groups (teachers), audio-recorded and transcribed conversations, and thematically analyzed transcripts with attention to differences by respondent role, school type, and state policy context. The goal was a cross-sector view of current practices, perceived barriers, and pathways for scaling math-civics concepts.

Results

Broad enthusiasm for math-civics. Every participant group expressed enthusiasm for teaching math-civics topics to address students’ genuine interest in civic issues and answering the enduring math class question, “When am I going to use this in real life?” Many were optimistic that developing math-civic literacy can reduce polarization and strengthen democracy, as well as empower future voters and leaders.

Broad interpretation of math-civics. Some participants understood it as the mathematics underlying democratic institutions (e.g., voting systems, redistricting), while others used the term more loosely to refer to data literacy related to a broad range of topics.

Current instruction addressing math-civics is minimal and unsystematic. Despite the enthusiasm, respondents overwhelmingly reported minimal current instruction at the intersection of math and civics. Where it does appear, it 1) clusters around election-cycle activities such as mock elections and 2) depends on the initiative of individual teachers rather than on a systemic approach.

No overwhelming consensus on where math-civics belongs. Respondents voiced roughly split opinions on the ideal home for teaching mathematical concepts underlying civics concepts. Math proponents support using such instruction to teach “real world” math. Civics/social studies

supporters feel it is a natural fit in civics/social studies classes since some of the topics are taught there already (e.g., electoral college) and because civics has less onerous standards requirements, which leave time to teach non-required topics.

Respondents see advantages to teaching math-civics across grade levels. They believe elementary grades are developmentally well-suited to interdisciplinary teaching; middle school is an optimal entry point, aligning with existing civics curricula and students' math readiness; and high school options include electives or units within AP Statistics, Government, or Economics. Several cautioned that an elective-only model would bypass the students most likely to benefit.

Respondents across roles reported five primary barriers to math-civics instruction. Standards and testing: Crowded, high-stakes curricula leave little room for content not tied to tested standards—yet alignment with standards is also seen as the strongest lever for adoption. Revising standards is a slow, state-specific process. Time and prioritization: Instructional time is scarce, and civics is already de-prioritized relative to math, ELA, and science. Teacher content knowledge: Civics teachers may feel unprepared to teach math concepts, and vice versa; co-teaching models are attractive but require dedicated planning time educators rarely have. Skill variation: Wide gaps in students' grade-level math proficiency, especially in Title One schools, risk excluding students or burdening civics teachers with remediation. Political sensitivity: Especially in states with policies like Florida's Parents' Bill of Rights, teachers fear repercussions for teaching topics like gerrymandering, even when they view the content as non-partisan.

What educators say they would need: Professional development that is compensated, flexible (e.g., online, train-the-trainer), grade-specific, and available on demand. "Turnkey" curriculum resources—lesson plans, pacing guides, digital and printable materials, along with tech support—that require minimal additional lesson-planning by teachers. Dedicated funding to pay for needed resources. Evidence of the efficacy of math-civics approaches for improving student outcomes, for example, those related to student engagement with learning, math proficiency, and citizenship. Neutral framing and proactive parent and community communication.

Implications

We recommend developing, piloting, and evaluating standards-aligned math-civics lessons for math classrooms, while also advocating for the inclusion of math-civics concepts in standards revisions. Lesson integration should prioritize core, standards-aligned courses over stand-alone electives. Partnering with core curriculum providers already vetted and adopted by districts offers a lower-friction path into classrooms. Durable progress will require parallel investment in standards alignment, teacher professional development, turnkey materials, sustained funding, and an evidence base. Effective scaling will likely require both top-down policy efforts through state standards and assessments, and bottom-up support from teachers and communities.

Next steps

Results from this study will inform a systemic effort to pilot and rigorously study math-civics teaching and learning. Funding priorities include development of standards-aligned curriculum and professional learning supports for teachers, advocacy to update state and national standards, and research to build the evidence base and support implementation.