



2021 Phoenix Regional Conference & Exposition Strand Titles & Descriptions

Rehumanizing Mathematics

In “The Need to Rehumanize Mathematics,” Rochelle Gutierrez states that “people throughout the world already do mathematics in ways that are humane. . . . Yet schooling often creates structures, policies, and rituals that can convince people that they are no longer mathematical” (*APME* 2018, p. 2). Gutierrez defines eight dimensions for rehumanizing mathematics: (1) participation/positioning, (2) cultures/histories, (3) window/mirrors, (4) living practice, (5) creation, (6) broadening mathematics, (7) body/emotions, and (8) ownership. Speakers in this strand will share strategies and resources they have used in their classrooms or in support of others to implement one or more of the eight dimensions of rehumanizing mathematics.

Annual Perspectives in Mathematics Education (APME). 2018. Reston, VA: National Council of Teachers of Mathematics.

Meeting the Needs of Each and Every Student

To meet the needs of every student, educators must consider equitable learning opportunities for students. Students are unique individuals—every one. Each student has their own dreams, desires, and needs. This strand will focus on meeting the needs of students who may often get overlooked, including neurodiverse students and students who have experienced trauma. Presenters may share experiences and successes of teaching and learning mathematics that meet the needs of each and every student.

Teaching Mathematics for Understanding with Multilingual Students

Each and every student deserves the opportunity to engage in high-quality mathematics and authentic problem-solving experiences—including multilingual learners. Awareness of the role of language can help teachers support their students in learning mathematics while also helping them learn the language through mathematics. Sessions will focus on teaching strategies that draw on students’ culturally and linguistically diverse backgrounds to support learning mathematics with deep understanding.

Building Family and Community Partnerships for Mathematics Learning

The global pandemic has transformed our understanding of what it means to connect learning outside our classroom walls. Teachers—used to crafting active, hands-on lessons—suddenly were faced with delivering content in an unfamiliar digital environment. Families quickly needed to take a more active role in their child’s education. Students went from being in a cooperative, active educational structure to receiving instruction in an isolated and passive way. Community organizations became more central in supporting education. Developing stronger bonds between those involved in the teaching of mathematics and the communities in which they work has become even more necessary. This strand will focus on ways to build partnerships, including how to engage with families and communities, create communities of learning within school personnel, and develop peer supports for students and teachers alike.

Using Research-Based Teaching Practices to Collaborate, Engage, and Assess

Teachers and teacher leaders engage in research almost every day as part of reflective practice, yet the myth persists that research is something that falls only within the realm of university faculty. Often research involves collaboration among teachers, students, families, and university faculty. Such work is important because it can involve the perspectives, experiences, and voices of those most affected by schools and schooling. In this strand, we invite speakers to share how they are collaborating, engaging, and systematically assessing their policies and practices to understand what best supports students' opportunities to learn. In addition to classroom-based research collaborations, we hope to highlight various types of action research, lesson study, design-based research, and cycles of inquiry that involve multiple stakeholders, investigate teachers' or students' opportunities to learn, and especially examine and improve inequitable practices.

The Joy of Teaching, Learning, and Doing Mathematics

Engaging in mathematics can provide both pleasure and a sense of achievement for many. Learning mathematics in a supportive environment can create confidence and motivation for students to take on new challenges. Speakers in this strand should focus on the joy of doing mathematics. Sessions may include strategies that inspire students to appreciate the beauty and utility of mathematics, connect to children's cultures and identities, or simply provide an opportunity to share a joyful mathematical experience with colleagues.

Catalyzing Change in K–12 Mathematics

The Catalyzing Change series reinvigorated critical conversations in mathematics education. All three publications raise critical questions about (1) broadening the purposes of learning mathematics, (2) creating equitable structures in mathematics, (3) implementing equitable mathematics instruction (4) developing deeper mathematical understanding (5) detracking students and teachers, (6) creating improved pathways for students in mathematics programs, and many other critical components to improve access to high-quality mathematics teaching and learning for each and every student. This strand looks explicitly for session proposals directly tied to catalyzing change in K–12 mathematics in response to the critical questions and recommendations within these publications.

