

AMS Newsroom

To Understand, Explain to Others

News

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At the Joint Mathematics Meetings (JMM) 2026, the American Mathematical Society (AMS) Committee on Education brought together speakers for a panel discussion on "The Role of Community in Communicating Mathematics."



(L-R) Sam Vandervelde, David Patrick, Lara Pudwell

Panelists Sam Vandervelde (Proof School), David Patrick (Art of Problem Solving) and Lara Pudwell (Valparaiso University/MathPath) represented three distinct types of mathematical community at the secondary-school level: secondary school, online community, summer camp.

"Within the context of teaching classroom math to middle and high school students, I believe that communication – especially in which a student conveys a concept, strategy, or solution to another student - is a powerful tool that should be a regular feature of any math classroom," Vandervelde said. "It's said that we learn by doing; I would augment that adage by saying that we understand by explaining to others," he said.

Vandervelde's classrooms utilize the "Think/Pair/Share" pedagogical technique and have extended this approach to students creating a gallery of proofs on whiteboard walls. "Another version of this principle involves giving a geometry practice quiz in which students work individually for twenty minutes, gather in teams of three to debrief one another so that everyone knows how to solve all problems, then are randomly chosen to present proofs to the instructor,"

Vandervelde said

"In any setting, I think it's important to know your audience and tell a good story -- any compelling paper I've read, talk I've heard, or conversation I've been a part of has a clear and compelling narrative trajectory and keeps the audience in mind to focus the level of detail," said Pudwell, who has taught at the MathPath summer camp for seven years.

"With secondary school students in particular, matching the focus of this panel, 'knowing your audience' includes being active and inviting participation to match their energy level and welcome them into the mathematics community," she said.

After the panel discussion, Vandervelde said, "I appreciated how Lara emphasized that talking about communities implicitly involves identifying common core values held by members of that community and sharing examples of those values for the MathPath program, such as 'math is not a race.'"