JOURNAL OF
MATHEMATICS EDUCATION
AT TEACHERS COLLEGE

A Century of Leadership in Mathematics and Its Teaching

Improving Discourse in Mathematics Education

JOURNAL OF MATHEMATICS EDUCATION AT TEACHERS COLLEGE | FALL 2022 | VOLUME 13, ISSUE 2

NOTES FROM THE FIELD

Empathy in the Math Classroom

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I will never forget what my mentor teacher told me when I was student teaching in Michigan: "You need to remember that you became a math teacher because you love math and you are good at math. Not all of your students are going to feel the same way." This advice has remained with me as I have begun my teaching career in New York, more so upon hearing countless grievances about math material. What seems to be a common thread throughout these complaints, however, is students often feel checked out and doubtful of their abilities in math. Moreover, they are avoiding feelings of embarrassment, frustration, or helplessness in front of their peers rather than taking intellectual risks. Thus, my mission as a math educator has been to foster classroom empathy and camaraderie among my students.

Discussions surrounding empathy in the math classroom are not new, but the more I read, the more I see a lack of tangible ways for educators to practice these skills. For teachers who have neither learned these approaches nor experienced this type of environment in their own school, it may feel unnatural to create it in their own classroom. While implementing empathy in the mathematics classroom may take many forms, these five suggestions are staples that I keep in mind when planning lessons throughout the year and are helpful to avoid that mid-year slump.

1. Ask students to address their feelings about math on day one.

On the first day of the school year, ask students to write a mathography, a personal account of their lived experience with mathematics. In addition, consider asking them questions such as: "What is your favorite memory that involves mathematics?" or "What does a mathematician mean to you?". This will encourage students to reflect more deeply on how math has affected them. Although these questions do not directly address their mathematical ability, they do provide insight into students' feelings and thoughts. Students can then slowly begin to see how math plays a different yet prominent role in their lives, and those of their peers. Analyzing their own biases and feelings about math can give students greater insight into their reactions to learning and sharing new ideas throughout the year.

2. Avoid immediately telling students their answer is incorrect.

For students who enter the math classroom with emotional baggage, immediately rejecting their answers not only discourages their participation, but also affects their self-confidence. Instead, it is essential to teach students the value of wrong answers. They provide you insight into how students are thinking; if one student shares their incorrect answer, there is a high probability that another student was thinking identically. Identifying the benefit of any student's answer or idea during discussions will then exemplify this for other students. If they are encouraged to participate and share their own growing ideas, they will encourage their classmates to do the same.

3. Build a culture of active listening.

As educators, we lead by example. If we want to create a positive classroom culture, then we need to exemplify this for our students. Giving students our full attention by facing them or using their words to extend the

discussion, will encourage others to do the same, and continue to boost confidence. In addition, making eye contact and acknowledging other students in classroom discussions encourage empathy and give value to each voice in the conversation.

4. Grade homework for effort, not mastery.

Ongoing debates about the role and relevance of homework occupy several subject areas, but what seems most essential in mathematics is its extension of daily learning and additional practice of various topics. If homework is graded exclusively on mastery, the result is discouraged students who, after one class period of learning about a new concept/topic, feel as if they need to understand it completely. Rather, grading homework on effort and allowing students the opportunity to redo assignments conveys the idea that homework is an opportunity for growth. Furthermore, including more open-ended questions can allow students to reflect on their learning. For example, after a lesson on trigonometric identities, a homework question might be: "How would you explain what trig identities are to a third-grade student?." Answers to this question will often give you more insight into learning than a calculation.

5. Involve families in the conversation.

I have noticed that for most of my students with a fixed mathematical mindset, I often hear the same message when calling their parents to check-in. Parents often think that if they did not get high grades in math growing up, or if they are not a "math person", then their child will grow up the same way. By informing parents of how we are using empathy in the classroom and how discussions around math are centered, they can communicate the same message at home and build their child's confidence. Moreover, building this working partnership with families early on ensures that all students can cultivate a growth mindset. Fostering this classroom culture should be happening in and outside of the classroom.

Math educators often have a daunting task set before them. We need to teach our students about solving equations, derivatives, and the Pythagorean Theorem, to name a few of the hundreds of state-mandated topics. This task is often made more difficult by the mental hurdles students have placed in front of them, hurdles that have been building for years. If we can begin to break these hurdles and build a classroom culture full of empathy and a willingness to grow, students can gain lifelong skills and a greater appreciation for learning.