

Points & Angles

Newsletter of the Metropolitan Mathematics Club of Chicago
Volume LI No. 2 Oct. 2021

Belonging in the Math Classroom

October Speaker Howie Hua



Date/Time: Friday,
October 29, at 7:00 p.m.

Location: Zoom online
platform

Registration: Register
online at mmcchicago.org

Cost: No charge;
donations welcome via
Zelle at
zelle4mmc@gmail.com

Howie Hua will join us on October 29th for a webinar on the importance of belonging in the math classroom. As we go through life, we often search for places that we feel like we belong. We know there are students who don't feel like they belong in math class when we hear them say things like "I'm not good at math," or "I'm not a math person". During this session, Howie will discuss how we can encourage a sense of belonging among all students in math class. He will emphasize the importance of students sharing their thinking and knowing their voices matter. He will give examples of open-ended questions that can be used in class to get all students thinking about math and help create an inclusive environment, as well as activities that promote their identities as mathematicians.

Howie Hua is a math instructor at Fresno State who teaches math to future elementary school teachers. He is passionate about finding ways to humanize the math classroom, listening to how students think about math and building mathematical confidence in students. Howie generously shares his memes, videos explaining math concepts, and classroom activities on social media for other math educators to enjoy and borrow. This summer, he organized weekly math summer sessions on Zoom and a free virtual conference for educators to share ideas with others in the math education community. In 2019, Howie was named Outstanding Lecturer for the College of Science and Math at his university. Outside of school, Howie likes to play piano, go on walks, and make math memes. We are thrilled to welcome him to MMC!

Points from the Interior

by Aimee Hart

It has been 4 weeks since I started full in-person learning again, and just today, I noticed something strange. A few students pulled their masks down to take a sip of water and the lower half of their faces looked nothing like I imagined they would. I had built an image in my mind of what they looked like without their masks on based on what I could see above their noses, and it did not match the reality of how they looked. I mentioned this to my class and several students told me they had noticed the same thing. It got me thinking about all the times I've been surprised by students because I had assumed something about them based on what little I knew, and that assumption was very different from their reality.

It is easy to make assumptions about students based on limited experience or current talking points in the faculty lounge, and with remote learning last year, it was even easier to fall into that trap. It is important to resist assuming we know a student's circumstances, why they behave the way they do or why they got the answer they did, because even when we are seeing trends, there are always exceptions. Yes, some students have their cameras off because they aren't paying attention, *and* some have them off because they are anxious being on camera and are unable to focus. Yes, students need to be in person. It is better for them to learn and for their mental health, *and* for some students, being in school is not a positive experience and they thrived in remote learning. Yes, some students are answering the question incorrectly, *and* they are still doing good mathematical thinking if we take the time to listen to them.

Last year many classroom teachers struggled with how to assess students when they were at home. (MMC even hosted an entire webinar on it!) I heard many stories from teachers who had students giving solutions to problems that involved more advanced mathematics than they had learned and notation they didn't understand thanks to photo math. I often noticed that students who were normally in person would log in remotely on the day of a test. When I had a couple students having a conversation one day before class started about whether or not they were going to leave school after lunch to take their afternoon test at home, I asked one of them what they thought the benefit of taking the test at home was. Her answer surprised me. She said she got very nervous during tests and felt more comfortable at home, that even though the test was open notes, she felt like the teacher would think less of her for using her notes, and sometimes she was so nervous her hands would shake, and she was afraid it distracted other students. Yes, there are students who took advantage of remote learning to cheat, *and* there are some who felt less anxious and did better on assessments because they were in the comfort of their own homes. It is easy to get caught up in the single narrative that is being pushed, and it is important to remind myself that it does not apply to everyone. At our first webinar of the year, Angela Marshall talked about developing student engagement in the classroom and emphasized the importance of first building student relationships. This is a message I strongly agree with and I appreciated hearing it again. If we don't get to know our students and hear their thinking, we miss out on so much and too often rely on our assumptions.

Mark Your Calendars:



Reserve the date! The 2021 ICTM Annual Conference, Pursuing Innovation and Equity, will be on Saturday, October 16, from 8 a.m. to about 1:00 p.m. This conference will be virtual to make it the most accessible for all people as we continue to navigate the pandemic. Check out <https://www.ictm.org/annual-conference>.



NCTM is committed to bringing the math community together for engaging content that will help transform the learning and teaching of mathematics. Join your colleagues for the NCTM 2021 Fall Virtual Conference, November 17-20, and share in the excitement and love of math! Our exciting online platform will provide opportunities for networking, small chat rooms, discussions with exhibitors and much more. Register at nctm.org/fallvirtual2021.

Developing Engagement During Remote, Hybrid, and In-Person Learning Models

By Carrie Fraher

Objective: To acquire tools to build relationships with and amongst students that will lead to richer engagement and in turn greater content mastery



Carol Nenne introduced Angela Marshall and shared memories of working together at Lemont High School. She observed that Angela built strong relationships with her students, used research-based strategies and inspired others with her work.

Marshall opened the session with a poll about the learning modalities of the teachers present. The attendees were primarily working in person right now, but a number were still involved in hybrid instruction. Participants were encouraged to share opportunities that have developed from crisis situations. Students need to connect. We can all be more flexible than we thought. Humans first, content second. We need to build relationships with our students.

Marshall introduced the 4 Pillars of Hybrid Education: Community Building, Relationship Building, Use of Tech Tools and Clarity and Communication. She emphasized that relationships are the most important with students seeking trust and investment from their teachers. Relationships are the key to content mastery.

Ideas for building stronger relationships with students included calling on students by name, games like Find the Fib, using interactive name tents, random facts questions to start class, attending extracurricular activities, turn student surveys into games, use student survey questions to form statistical data for use in class, dad jokes, talking about non-school related subjects, letting them teach you about their interests, remembering things about their lives, sharing about our own lives, engaging in activities, and using their interests in your lessons and activities. Apologize when you mess up. As you move towards academic work, consider some fun logic puzzles. Students can work together and build relationships.

An example lesson plan structure included Community Time, Check for Understanding, Discovery, Direct Instruction (Keep it concise.), Synchronous or Asynchronous Activity, Homework or Practice (Keep it simple.). Marshall emphasized taking your time, thoughtful pauses, and letting students ask questions instead of doing many examples.

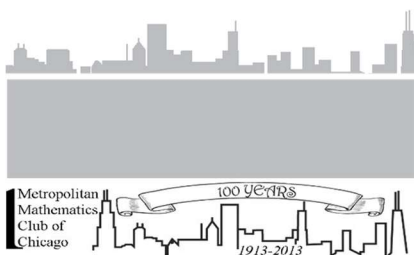
Participants were called on to answer: What's your but? Why can't you incorporate these activities to build community and relationships? Marshall referenced Desmos as a tool for discovery and challenged all to examine the level of debrief needed after discovery. A balance of insightfulness vs direct instruction was discussed.

Book recommendations from the talk:

Rebound by Douglas Fisher, Nancy Frey, Dominique Smith and John Hattie

The Distance Learning Playbook by Douglas Fisher, Nancy Frey and John Hattie

Building Thinking Classrooms in Mathematics by Peter Liljedahl



Metropolitan Mathematics Club of Chicago

Affiliate of ICTM & NCTM

MMC Virtual Conference SAVE THE DATE

given by teachers for teachers

Saturday, February 12, 2022
8:30 a.m. – 12:10 p.m.

OPTIONAL POST-SESSION DISCUSSION
12:10 to 1:10 p.m.

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Board Briefs

By Beth Ann Ball

May Meeting:

The last meeting of the 2020-21 Board of Directors and the first meeting of the 2021-22 Board of Directors were held via Zoom on May 23, 2021. The decision was made to continue with virtual “dinner” meetings until the end of 2021. The plan is a return to the Fountain Blue for the last three meetings of the year, if it seems safe to do so.

August Meeting:

The Board of Directors of MMC met over Zoom on August 17, 2021. The Conference of Workshops will be held virtually on February 12th from 8:30-12:10 and will include the popular after-session. The call for conference speaker proposals will be throughout the month of September with speaker notification by the end of October.

Is your membership current? Check your mailing label to see when your membership expires. You can renew by mail with the form below or renew in person at the next dinner meeting.

NAME		PREFERRED CONTACT Check one:	
HOME ADDRESS		<input type="checkbox"/> Home <input type="checkbox"/> Work	
CITY	STATE	ZIP	
HOME PHONE	HOME E-MAIL		
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CITY	STATE	ZIP	
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ELECTRONIC-ONLY MEMBERSHIP Check the box below for electronic-only membership. You will receive an email with a direct link to each issue of <i>Points & Angles</i> when it is posted on the web site, often before paper copies are mailed. You will no longer receive <i>Points & Angles</i> by mail.		MEMBERSHIP TYPE Check one:	
<input type="checkbox"/> Electronic-Only Membership		<input type="checkbox"/> 1 year (\$35) <input type="checkbox"/> student*, 1 yr (\$22)	
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FORM USE Check one:		MEMBERSHIP COST \$	
* The student and 1 st -year teacher memberships are only available as electronic-only.		DONATIONS	
		SCHOLARSHIP FUND \$	
		SPEAKER FUND \$	
		TOTAL AMOUNT OF CHECK \$	

Make check payable to **MMC**

MMC Membership and Change of Address Form
Mail completed form and check to:
MMC
1644 Portage Run
Glenview, IL 60025

Upcoming Events

Sat., Oct. 16		ICTM Annual Conference--Pursuing Innovation and Equity
Nov. 17-20		NCTM Fall Virtual Conference
Fri., Jan. 21	Mary Wiltjer	What I Didn't Learn About Teaching Math During the Pandemic (Fountain Blue)
Sat., Feb. 12		MMC Conference of Workshops (via Zoom)
Fri., Mar. 4	Ben Orlin	Mathematical Games and Why They Matter (Fountain Blue)
Fri., Apr. 22	TBA	To Be Announced (Fountain Blue)
Fri., May 20	Zalman Usiskin & Andrew Chukerman	NCTM and a Century of Mathematics Education – A Review with Music (Fountain Blue)

Send upcoming event items to sburnett_308@yahoo.com no later than the date of the MMC dinner meeting preceding the issue in which the item should appear. All items are subject to editing.

Your membership renewal date appears in the upper right corner of the label

