ncsm Leadership in Mathematics Education

Inspiration!

WINTER 2024-2025 | VOLUME 55, NUMBER 2

FROM THE NCSM PRESIDENT... KATEY ARRINGTON

KATEY ARRINGTON

LEARNING TO SCALE INNOVATIONS

As a BOLD leader in mathematics education, I am confident that you see innovation in schools and classrooms frequently. Educators are always implementing new strategies or lesson designs to improve the learning and experience of their students.

Teachers I know often talk about the "ah-ha moments" of students and how wonderful it is to see those lightbulbs turn on. I will contend that it is just as delightful to see an educator try something new that works with their students. It is not always easy or comfortable to be innovative, and not every new thing works perfectly on the first try! Educators are brave and show leadership through their willingness to innovate for their students. Andy Warhol once said, "They say time changes things, but you actually have to change them yourself." The best educators I know are the best because of their purposeful and courageous work to continually improve their own practice through innovation and then they support others in doing so too.

While innovation is incredibly important in education, I often think about what we do with the learning we achieve. When an innovation appears to have worked in one setting, how do we leverage that knowledge to expand the potential impact of that innovation? The education system is set up to reward and praise finding new ideas with potential for positive impact, but not for effectively implementing those innovations for impact at scale. For example, there are many grants available for testing an innovative idea for potential impact, but where are the grants for those who want to

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implement those promising ideas? Charter schools exist to allow innovative structures and practices, but what are the processes for capturing the learning about their successes and challenges and sharing those learnings across the system? Also, where are the opportunities and resources to leverage those learnings to benefit all students?

Results for Development (R4D), an organization that was formed to "work at the nexus between thinking and doing, with skill not just in developing promising, evidence-based ideas but also in the arduous art of applying them in practice" in health, education, and nutrition. They were created to step up efforts to not just innovate but ensure that new knowledge generated from innovation is turned into action at scale.

In 2023, R4D was a part of a world-wide gathering of innovators and educators, The HundrED Innovation Summit, where they documented several challenges to scaling innovations in education. They noted resistance to change across the education system from policy makers to school level, a lack of advocacy channels which causes information gaps, and a lack of understanding about innovation processes and/or insufficient capacity to support implementation in schools as obstacles. To overcome these impediments, they recommend empowering educators, in partnership with experts in our communities, to co-create practices and networks that support innovation and to work together to make decisions about how and when to scale innovations. They suggest that innovations need local, regional, and national champions to advocate for change and resources to support the change efforts, to share about approaches and evidence generated, and to coach and mentor those implementing the changes.

The National Academies of Sciences, Engineering, and Medicine (NASEM) is also doing some deep investigation about scaling innovations in STEM education and just published a report, Scaling and Sustaining Pre-K–12 STEM Education Innovations: Systemic Challenges, Systemic Responses. The description of the report on their website says that while there has been a rich variety of education innovations in STEM that "have potential to impact learners on a broad scale, that potential often remains unrealized." While there are plenty of innovative ideas that have shown promise, issues with wide scale implementation efforts are preventing those innovations from achieving their potential positive impact for students

NASEM reports that they found some key characteristics of innovations that seem to facilitate scaling, though. They found that an innovation is more likely to scale when the objectives of the innovation are clearly aligned with the goals and priorities of the adopter (district, school, or educator). Innovations that are well-defined but also leave opportunity for adjustment for different contexts are also more likely to scale. Support and professional learning that increase the capacity to implement the innovation are also key to the success of scaling.

Partnerships support scaling in multiple ways. Partners who help to create innovations might both support implementation and guide improvements of the innovations. "If an innovation is developed by an entity outside of the K–12 system, such as a university or a non-profit, partnering with districts, schools, and teachers as the innovation is designed and enacted can provide developers with in-depth insights into how contextual factors influence implementation and outcomes. These insights

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can guide subsequent improvements" (p. 5). Other types of partnerships can be productive in moving forward with implementation at scale, as well, including philanthropy or local business and industry who might provide funding and other resources and supports.

—COMING SOON—
NCSM will publish a position paper in spring 2025 that highlights the power of partnerships for supporting mathematics educators.

NASEM is intentional to point out that when we consider scaling innovations, we should measure success in the spread of an innovation, but also attend to depth of impact, sustainability, and ownership of the innovation. Is the innovation creating the substantial shifts intended? Who is the authority over this innovation? How do we ensure it will endure over time?

I believe that mathematics education leaders are innovators, and that we must focus our energy not solely on innovation itself, but on implementing innovation at scale so the work we do benefits each and every student. Arthur Ashe once said, "Start where you are. Use what you have. Do what you can." How can we all be more intentional about harnessing what we know is possible and what we are learning about scaling innovations to have greater impact for more students?

"Try new things. Don't be afraid.
Step out of your comfort zone and soar..." —Michelle Obama

FOR MORE READING

https://nap.nationalacademies.org/catalog/27950/scaling-and-sustaining-pre-k-12-stem-education-innovations-systemic

https://r4d.org/about/

https://r4d.org/blog/scaling-education-innovations-lessons-from-the-2023-hundred-innovation-summit/#comments

FROM A CONFERENCE SESSION TO CLASSROOM LESSONS

By Brian Buckhalter | NCSM President Elect


BRIAN BUCKHALTER

"NCSM celebrates its 57th Annual Conference, continuing our dedication to the life-long learning of bold mathematics education leaders. NCSM is committed to supporting leaders' work in inspiring high-quality mathematics teaching and learning every day for each and every learner." —NCSM Website: 2025 Annual Conference

But what does it look like when leaders' work in their home districts is directly supported by their NCSM experiences? Meet Dr. Teresa Wright-Fraser, the Director of Mathematics for the Normandy Schools Collaborative in St. Louis, Missouri and part of her team of Mathematics Instructional Coaches. Dr. Wright-Fraser and her team of bold leaders attended the 56th NCSM Annual Conference in Chicago, Illinois; among their most insightful sessions attended included learning more about Building Thinking Classrooms (BTC) from author Dr. Peter Liljedahl.

Recently I had the opportunity to see the team in action and talk with them about taking their

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FROM A CONFERENCE SESSION TO CLASSROOM LESSONS

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learning from the annual conference back to classrooms, building from theory to practice.

Pictured above: Dr. Peter Liljedahl (third from left), Dr. Wright-Fraser (second from left), and several coaches from the Normandy School Collaborative at the 56th NCSM Annual Conference in Chicago, Illinois.

First, how was your experience at last year's annual conference in Chicago?

The Chicago NCSM experience … was GREAT! The energy of the conference itself is invigorating and truly inspiring. There is no price tag that can capture the value of an NCSM conference. It was an unparalleled opportunity to network with other district leaders striving to change the trajectory of students' mathematics experiences. The sessions were a perfect blend of research-based insights and practical strategies for mathematics instruction. The real-time, immersive learning experiences were particularly impactful—role-playing activities allowed team members to step into the roles of both teacher and coach, providing a unique space to practice and receive feedback. The depth and breadth of learning at NCSM are truly unquantifiable, but the intimate, collaborative nature of the conference is what makes it especially memorable. This aspect resonated strongly with my team, who attended for the first time and are already looking forward to returning.

You attended Peter's session around BTC. What made you all decide to attend that session and what were some big takeaways for you all?

In striving to change the culture of mathematics learning in the district. When I was hired as the Director of Mathematics, I was charged with bringing innovation to the mathematics programming at Normandy Schools Collaborative. Having been introduced to BTC at previous NCSM conferences, the idea of students doing the thinking, all students having equal access to high quality tasks spoke to my beliefs and philosophy, which became one of our district's central mathematics initiatives. Our collective takeaways highlighted the immense power of rich tasks in engaging students. We left pondering critical questions: "What must our teachers do, and how should they prepare to facilitate BTC tasks effectively?" Furthermore, we reflected on what collective support we, as leaders, need to provide to ensure success in implementing these practices.

Describe how you all decided to bring back what you learned in terms of supporting classroom implementation. What did the transition from learning to practice look like?

The transition from learning to practice included providing job-embedded refresher professional learning and regular check-ins. The next layer was district professional development allowing teachers across the district to collaborate in grade level teams to engage in professional learning. We are now working in PLCS, collaborative grade level and content teams to 1: identify the task/tasks;

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FROM A CONFERENCE SESSION TO CLASSROOM LESSONS (CONTINUED FROM PREVIOUS PAGE)

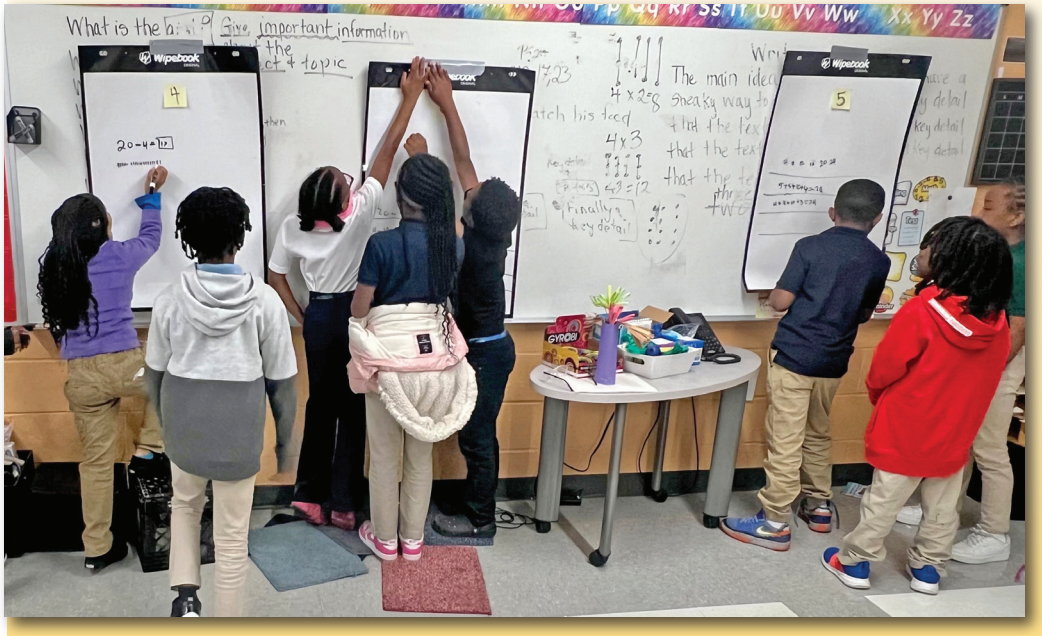
2: solve the task in multiple ways, think about strategies, misconceptions, and how you respond to misconceptions, how are you organizing your groups, are teams are adding an identifier to their presentations to remind themselves that this is "THE Task"; and 3: answer "What does facilitation look like?" These steps have helped us bridge the gap between theory and practice, fostering a collaborative and reflective approach to mathematics instruction.

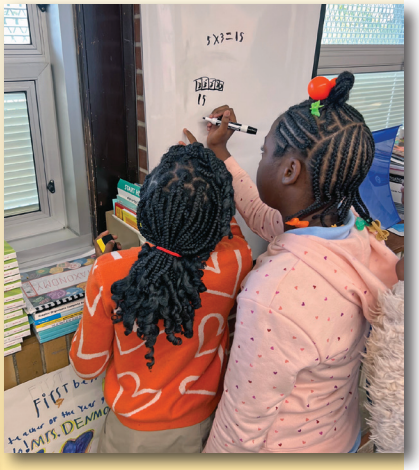
What have you seen implemented in classrooms related to BTC, and what impact have you seen on student learning?

We have a few teachers who have embraced the BTC processes. However, across the district we have seen teachers move from fear and apprehension to more confidence and willingness to transition the thinking in the classroom to the student. We have seen students become more enthusiastic participants during mathematics instruction/class.

Where do you see this effort going?

We see this effort resulting in increased student engagement and excitement about mathematics; increased teacher collective efficacy in mathematics instruction; improvement in elementary teachers' capacity to engage students at higher cognitive levels; and middle and secondary teachers moving from traditional lectures and making mathematics meaningful and accessible for all Normandy students at high levels.





Students at Jefferson Elementary, Normandy School Collaborative in St. Louis, Missouri collaborating on non-permanent vertical surfaces.

Although learning never stops, we particularly look forward to each year's annual conference as an opportunity to "fill our buckets" as mathematics education leaders. Don't forget to make your arrangements to join us for the 57th NCSM Annual Conference: October 13–15, 2025 in Atlanta, Georgia. For more information, visit mathedleadership.org.

REGIONAL REPORTS

NEW YEAR TRADITIONS AND RESOLUTIONS IN MATHEMATICS EDUCATION

NCSM Regional Directors from US Eastern 1, Eastern 2, and Southern 1 start the new year sharing their mathematics reflections and resolutions.

Amy Lucenta, NCSM US Eastern 1 Regional Director

AMY LUCENTA

REVISITING AND RESETTING PROFESSIONAL GOALS THROUGHOUT THE ACADEMIC YEAR

As educators, we set professional goals each year that impact students' experiences and outcomes in a variety of ways.

As coaches and leaders, we set goals that focus our work with teachers and support their own professional goals all the while improving our coaching and leadership practices. Goals may include increasing data collection during coaching cycles, weaving a focus on mathematical discourse throughout all our coaching cycles, or unit-planning with grade levels to develop pedagogical content knowledge. Teacher goals may also address a range of foci—improving classroom management, implementing manipulatives or technology, engaging in additional coaching cycles, supporting access to mathematical thinking for students with learning disabilities, or implementing instructional routines, to name a few.

Despite presenting multiple distractions that may cause us to lose sight of our goals, the cadence of the school year also provides multiple opportunities to revisit them. The mid-year mark is a powerful opportunity to self-assess, revise, and re-calculate our paths to achieving our goals so that they serve as the intended beacons for our work throughout the year. At this point leaders and coaches deeply understand the cultures of their contexts and demands of the year as teachers deeply understand the needs and strengths of their students and their classrooms.

Here are some reflection questions to refocus work toward professional goals mid-year:

1. What evidence do you see of your goal in action? What small moments have resulted from your work that you'd like to celebrate? When have you been most successful enacting

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Amy Lucenta, NCSM US Eastern 1 (CONTINUED FROM PREVIOUS PAGE)

your goal? What supports and structures have made this progress possible?

2. What are some barriers to your work on your goal? How might you recalculate your path to circumvent these obstacles? Is there a way to remove the barrier or gain support from colleagues to reduce the barrier?

3. What routines did you lean into to begin work on your goals? How can you re-establish and/or augment these routines to advance your work? Are there additional routines that you can lean into to advance your goals?

4. Are there supports, structures, or resources that will help you achieve your goal during the second half of the year?

These questions are not only support for us as leaders to continue progressing toward our goals, but they can also be valuable tools for coaches' collaboration and their work with teachers. If teachers reflect and share with coaches, then, together, they can take action steps to support their work. Here are some possible action steps that may emerge from the conversations and collaborative reflections:

- Coaches name aspects of their own practice and share with colleagues;
- Coaches collect evidence of the teacher's goal in action to support teacher's identification of success toward their goals;
- Teachers gain support and collaboration to circumvent challenges they are facing when implementing their action plans;
- Coaches co-facilitate and reset instructional routines that serve as vehicles for teachers to work on their practice and goals, perhaps a number talk to facilitate meaningful mathematical discourse; and
- Teachers engage students in new instructional routines, like 3 Reads, to support students to make sense of word problems and persevere in solving them independently.

The mid-year reflection is also an important time to revisit the process of how we build new habits that will work toward achieving our goal. James Clear, author of Atomic Habits, creates a powerful image when he writes,

> *"All big things come from small beginnings. The seed of every habit is a single, tiny decision. But as that decision is repeated, a habit sprouts and grows stronger. Roots entrench themselves and branches grow. The task of breaking a bad habit is like uprooting a powerful oak within us. And the task of building a good habit is like cultivating a delicate flower one day at a time."*

As we continue to both self-reflect and support teachers to do the same, it is critical that we "keep the ***why*** in mind." The reasons for which we set our goals into action serve as our daily inspirations. How will you keep your ***why*** in mind?

Clear, J. (2018). *Atomic habits: An easy & proven way to build good habits & break bad ones.* (PDF ed.). New York: Avery.

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Karen Riley Jeffers, NCSM US Eastern 2 Regional Director

KAREN RILEY JEFFERS

A TIME OF REFLECTION

Fireworks, family gatherings, reunions with loved ones, cleaning homes from top to bottom, dance parties, and watch night services are just some of the traditions people engage in as one year sets and the new one dawns.

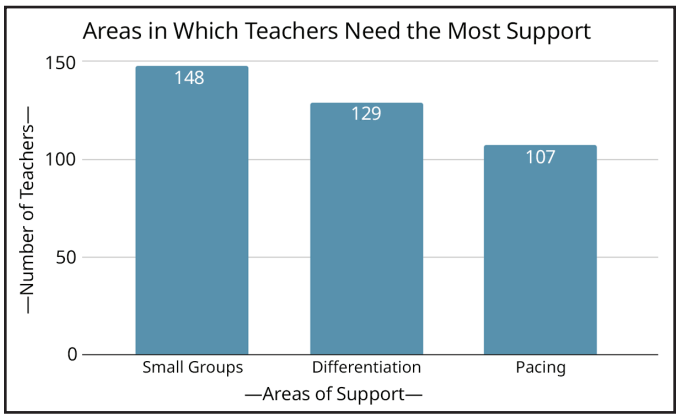
It's a natural break in the course of time that lends itself to reflection, re-evaluation, and goal setting. For those of us in school systems, this time of year marks the end of the second quarter/first semester, making the start of the calendar year prime time for monitoring any projects or goals we set for this school year.

During the 2023–2024 school year, The Elementary Math Team in Anne Arundel County Public Schools (AACPS) in Maryland had the goal of implementing a new curricular resource. To support the efforts of ensuring all educational partners were trained on the resource, the elementary mathematics specialists worked diligently to craft and facilitate monthly, after school, virtual, professional learning opportunities that allowed teachers to take a deep dive into planning and preparing for upcoming units. Additionally, the specialists supported schools by facilitating collaborative planning sessions for grade specific teams and modeled lessons as needed. While the completion of evaluations at the end of these sessions helped the team monitor the progress of the support provided, there were still unanswered questions regarding how teachers were progressing with the use of the resource and in what areas they still needed help. Thus, the creation of a mid-year survey was distributed to teachers in January of 2024.

From this survey (approximately 400 responses), the AACPS team learned the following:

- 1,090 teachers participated in the after school virtual professional learning offerings from October to December.
- 95% of K–5 elementary schools participated in virtual after-school sessions.
- Session evaluations indicated that teachers take the information learned back to their schools and share in their respective grade level teams.
- 85% of teachers report that the sessions are effective in helping them gain relevant content knowledge and skills.

While other information inclusive of data was captured, what was most striking was teachers self-reporting they needed the most support with small groups, differentiation, and pacing as indicated in the following graph.



This information helped the team curate sessions and tailor collaborative planning meetings to address these needs, not just for the remainder of school year 2023–2024, but for this current school year as well.

Progress monitoring is something we do in many aspects of our work in education. This work ranges from things we want to achieve personally to aspirations we have for our students, schools, districts, and more. As teachers, we begin with goals for our students to learn certain aspects of mathematics daily. However, until we implement that lesson, we have no idea how our students are going to respond. We also do not know whether they

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Karen Riley Jeffers, NCSM US Eastern 2 (CONTINUED FROM PREVIOUS PAGE)

will understand what we intend for them to learn. If we wait until the end of the lesson to gauge students' progress in learning, it may be too late for some, prompting the need to monitor student learning throughout the lesson and provide just-in-time supports. Similarly, we risk paralleled impact if we wait until the end of the school year to gauge the progress of our own goals.

Thus, during this natural pause for reflection, take stock of your projects, goals, and aspirations. Consider what other benchmarks of time you can strategically create to check in on your goals before the end of the school year.

What conversations might you need to have and with whom? What additional traditions can we create around our work at this time of the year to ensure we meet our goals?

As we establish our goals, sitting in a space of optimism and hope of the positive things we want to achieve in the end, let's be satisfied in knowing our anticipated results, based on the actions of monitoring and adjusting our work along the way.

What are some traditions in your district at this time of year? Feel free to post and tag #NCSMBold in your response on social media.

Anne Arundel County Public Schools Elementary Mathematics 2023–2024 Mid-Year Review.

Abi Ruiz, NCSM US Southern 1 Regional Director

ABI RUIZ

EMBRACING NEW BEGINNINGS: OUR COLLECTIVE RESOLUTION FOR EQUITABLE MATHEMATICS

As the new year unfolds, it brings the promise of new beginnings and the urgency of action which manifest as resolutions.

This time of reflection and goal setting is particularly important in our mathematics education community. Drawing inspiration from the principles laid out in *Catalyzing Change* (NCTM, 2020), I am reminded that equitable mathematics education does not happen by chance but through intention, and it begins with us. I therefore find myself more committed than ever to working toward our collective efforts. Now is the time for all of us to make a bold commitment, a mathematics resolution to ensure that every student has access to rigorous mathematics education, and the opportunity to experience its wonder, joy, and beauty (NCTM, 2020). But resolutions alone are not enough, we need leaders who are ready to step forward, take bold action, and catalyze change. Now is the time to leap into leadership.

Building on this resolution, we must recognize that leadership is not reserved for the few, it is a responsibility we all share. Our resolution aligns with NCSM's vision to empower a diverse mathematics education community. Together, we can move beyond words and resolutions to action. Through this joint commitment, it is possible to ensure that all students engage in equitable and joyous educational experiences that inspire them to harness mathematics as an agent of change. In championing these values, we also reinforce our mission to develop leaders who transform the landscape of mathematics education to be a gateway and not a gatekeeper for our students.

Reflecting on my personal journey, one of my resolutions last year was to become more

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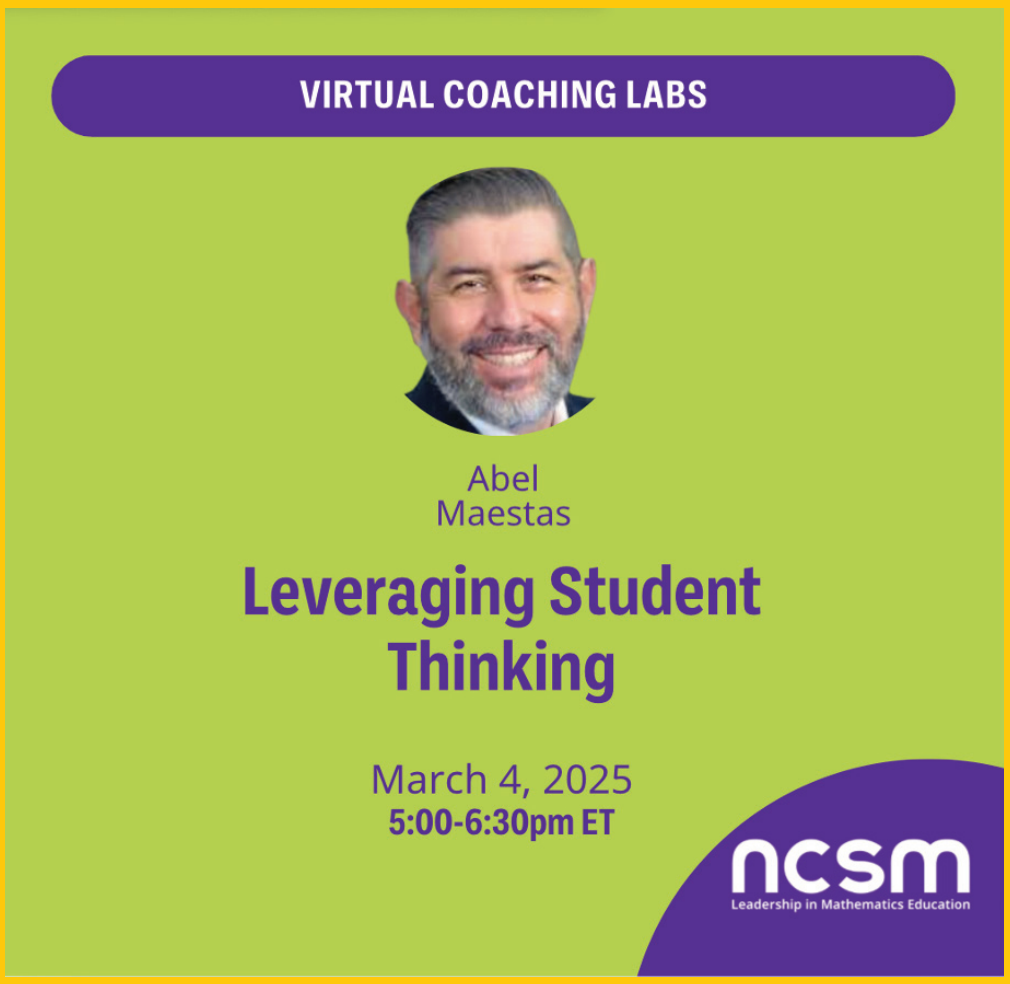
Abi Ruiz, NCSM US Southern 1 (CONTINUED FROM PREVIOUS PAGE)

engaged in the mathematics education community. That resolution pushed me to take the leap into leadership as Southern 1 Regional Director. Truthfully, taking on this role has been scary, exciting, and necessary for my personal growth as a leader. Every moment has reminded me that progress, just like mathematics, is not always linear. Whenever the magnitude of last year's resolutions feels overwhelming, I think back on what Dr. Paul Gray Jr. recently wrote regarding mathematics growth and progress: it's like dancing the "cha-cha," where steps may sway you back and forth, but always move you onward.

So here's my challenge to you—step onto the dance floor! To build on this time of momentum, take a leap of leadership this year. I encourage each of you to actively participate in our community and attend state, regional, and national conferences. Connect with your NCSM affiliate and let your voice contribute to the collective knowledge of our community. Every step you take helps sustain a more inclusive community, advancing equity and enriching mathematics education for all. Together, we can ensure our joint resolutions lead to actions that effect lasting change in mathematics education. As we step forward into a year of new challenges and opportunities, consider how your personal mathematics resolutions fit into our shared commitment. What specific actions will you take to support our collective resolution to promote equitable mathematics teaching and learning?

National Council of Teachers of Mathematics (2020). *Catalyzing change in early childhood and elementary mathematics: Initiating critical conversations.*



REGISTER HERE TO JOIN OUR LAST COACHING LAB OF THE YEAR:
https://www.mathedleadership.org/pl/ncsm-virtual-coaching-labs/

APPLY NOW FOR THE NCSM FELLOWS PROGRAM

ARE YOU READY TO TAKE YOUR LEADERSHIP IN MATHEMATICS EDUCATION TO THE NEXT LEVEL?

The NCSM Fellows Program invites passionate individuals to apply for this transformative experience designed to support and inspire leadership excellence in mathematics education.

NCSM's mission is to "equip and empower a diverse education community to engage in leadership that supports, sustains, and inspires high-quality mathematics teaching and learning every day for each and every learner." The NCSM Fellows Program is a key initiative to advance this vision.

Timeline

- **Application Deadline:** May 1, 2025
- **Notification of Selection:** June 1, 2025
- **Rubrics Available:** October 2024

This is a unique opportunity to enhance your leadership skills, connect with a vibrant community, and contribute to the future of mathematics education.

Apply now and take the next step in your leadership journey!

For more details and to access the application, visit https://www.mathedleadership.org/ncsm-fellows-program-information/.

LEARNINGS FROM LEADERS

NCSM Regional Directors from US Western 1, US Eastern 2 , and Canada have found leaders in their regions to discuss their leadership journeys, mentors, and impactful professional development.

US WESTERN 1 REGION

EBONY McKINNEY

Ebony McKinney is the Director of Mathematics and Educational Technology for the Arizona Department of Education (ADE), Academic Standards Unit. She started out as a Mathematics Program Specialist for ADE in Exceptional Student Services. Before working for the state, she spent 11 years working in Southern Arizona, in the Sierra Vista Public School District, as a Student Achievement Teacher, and as a Teacher Leader and education advocate. As a classroom teacher she taught 4th, 5th, and 6th grades. She advocated for her students and colleagues as president of her local association, as the Region 12 Director for the AZ Education Association, and as Southern Vice President for the Arizona Association of Teachers of Mathematics. As an IMPACTS Teacher Leader she facilitated mathematics professional development with the IMPACTS program through the University of Arizona Center for Recruitment and Retention of Mathematics Teachers. She has presented at the local, state, and national level. She earned her BA in Elementary Education from Prescott College, Arizona; her MA in Mathematics Teaching; and a certificate in Professional Development and Coaching from Mount Holyoke College, Massachusetts. Ebony currently serves as the President of the Association of State Supervisors of Mathematics.

—Kris Cunningham, W1 Regional Director

What motivates you to be a leader in mathematics education?

My motivation comes from a deep belief in the transformative power of mathematics education. As a teacher, advocate, and now a director, I have seen firsthand how empowering educators with the right tools and strategies can open doors for students and cultivate a lifelong love of learning. I am passionate about fostering equitable access to high-quality mathematics instruction that ensures all students, regardless of background, have the opportunity to succeed.

What do you feel is your greatest contribution to mathematics education?

One of my greatest contributions was my work as an IMPACTS Teacher Leader, where I facilitated professional development that directly strengthened teachers' confidence and competence in mathematics instruction. Additionally, my advocacy efforts, including serving as President of my local education association and on the boards of the AZ Education Association and AZ Association of Teachers of Mathematics, have helped shape policies and initiatives that prioritize teachers, which ultimately impact our students.

What is the most valuable professional development you have ever received?

The IMPACTS program through the University of Arizona has been one of the most valuable professional development experiences of my

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career. It equipped me with the skills to facilitate meaningful mathematics professional development and provided a platform to lead transformative conversations with educators. Additionally, my master's degree in mathematics teaching and my graduate certificate in Professional Development and Coaching from Mount Holyoke College were game-changers for me! Both programs helped me refine my skills and ability to support teachers effectively.

What words of wisdom would you offer to someone new in the field, one who is interested in developing their leadership potential?

Leadership is about service. Start by listening to the needs of your colleagues and the students they serve. Build strong relationships, remain curious, and never stop learning. Join professional organizations like the National Council of Supervisors of Mathematics (NCTM), the Benjamin Banneker Association (BBA), or NCSM to connect with like-minded peers and grow your network. Finally, remember that every step you take—big or small—contributes to a greater impact on mathematics education.

What is the most important issue for leaders in mathematics education today?

Equity remains the most critical issue. Leaders must work to dismantle systemic barriers that prevent marginalized students from accessing high-quality mathematics instruction. This requires intentional efforts to provide culturally responsive teaching, support for diverse learners, and professional development opportunities that equip educators with strategies to meet the needs of all students.

Interview by Kris Cunningham | NCSM Western 1 Regional Director

EASTERN 2 REGION

JENNIFER MALUE BARTONE

Jennifer Malue Bartone is a doctoral candidate in Marymount University's Educational Leadership and Organizational Innovation EdD program with anticipated graduation in May, 2025. Her dissertation in practice qualitative case study investigates the factors contributing to teacher self-efficacy in teaching secondary mathematics. Her dream is to become an Assistant Professor of mathematics education, and she is passionate about preparing mathematics teachers for the realities of the classroom while helping to build strong teacher self-efficacy in teaching mathematics. Additionally, as a neurodivergent teacher, Jenn advocates for equitable teaching practices to meet the needs of neurodivergent learners. With over sixteen years of mathematics teaching and mentoring experience, Jenn currently works as a mathematics intervention teacher for students in grades 7–12. Additionally, she has been an adjunct mathematics professor at three universities in Erie, PA. She is grateful for the mentorship of Dr. Anna Macedonia as her dissertation's lead doctoral faculty member, Mr. Kevin Dykema as her secondary committee member, and Dr. Pamela Seda as her mentor regarding mathematics equity. Outside of mathematics education, Jenn is a proud wife, daughter, sister, aunt, and godmother.

—Karen Riley Jeffers, E2 Regional Director

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I HAVE TAUGHT MATHEMATICS FOR THE PAST 16 YEARS WITH THE CORE BELIEF THAT "WE RISE BY LIFTING OTHERS." This mantra is the foundation of my role as a doctoral candidate, mathematics intervention teacher, adjunct professor, and advocate for equity in mathematics. I model authenticity, culturally responsive teaching, and a growth mindset for my colleagues and students. I work to dismantle the barriers to access and success in mathematics by validating students' feelings from their past experiences. Then I challenge limiting beliefs such as "I am not a math person" and "I am going to fail this test" by using statements such as "I have felt math anxiety," "I don't understand this math concept yet," and "Mistakes are a chance to learn and grow." This approach not only shifts students' perceptions but also promotes a mindset conducive to resilience in mathematics.

Before entering the EdD Educational Leadership and Organizational Innovation program at Marymount University, I was presented with limited opportunities for professional development and networking with leaders in mathematics education. However, the encouragement of my lead doctoral faculty member, Dr. Anna Macedonia, led me to engage with national mathematics organizations such as NCSM Leadership in Mathematics Education, National Council of Teachers of Mathematics (NCTM), and Association of Mathematics Teacher Educators (AMTE). I found a wealth of resources and made connections through book studies, virtual coaching labs, webinars, and conferences which deepened my commitment to lifelong learning. After the NCSM Annual Conference in September 2024, I felt empowered to "break barriers with bold mathematics leadership." I was determined to advocate for professional development opportunities for teachers in our district, many of whom had never been afforded such opportunities.

When I met Dr. Pamela Seda, education consultant and author, at the NCTM Regional Conference in Seattle, I immediately felt a sense of belonging in the mathematics education community. Her guidance has been instrumental as I work with mathematics teachers to implement elements of her ICUCARE equity framework in their instruction (Seda & Brown, 2021). I look forward to collaborating with her on a journal article where we explore how leaders can implement the ICUCARE equity framework. I am also excited to serve on the audit committee of the Benjamin Banneker Association where Dr. Seda serves as President. Dr. Seda embodies her framework as she has "included me as an expert" and helped me grow in my self-efficacy as a leader in mathematics education.

Additionally, I look up to Mr. Kevin Dykema, Past President of NCTM, as a servant leader. Mr. Dykema inspires me to lead with authenticity when sharing the joy and passion I have for building teacher and student self-efficacy. He models healthy work/life balance while prioritizing self-care. I am especially grateful for his support and collaboration in developing virtual trainings for teachers in Uganda through Marymount University's Education Department. These training courses promote student discourse through

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activities such as "same but different" (Looney, 2017–2022). The Ugandan teachers were welcomed into our ninth grade Algebra 1 class where my co-teacher and I modeled instruction using vertical whiteboards to promote student discourse (Liljedahl, 2023) and to encourage productive struggle (SanGiovanni et al., 2020). Further, Mr. Dykema provided guidance before the presentations. I am thrilled to share his advice with my previous student teacher, Kellie Benedict, when we present together at the NCTM Virtual Conference in April 2025 regarding the importance of mentorship, lifelong learning, and implementing technology in instruction. I am humbled that Mr. Dykema agreed to be my secondary committee member for my dissertation in practice and I look forward to working with him in this last semester of my EdD program.

My dissertation in practice investigates the factors that contribute to teacher self-efficacy in teaching mathematics. As a scholar practitioner, I hope this study will prompt reflection in university-based teacher preparation programs. In particular, my study highlights the importance of honesty and transparency in mathematics teaching and mentorship, which my participants identified as crucial for fostering self-efficacy. Further, my study reveals the need for more special educational preparation including incorporating culturally responsive pedagogy in teacher preparation programs to better support students from historically marginalized backgrounds. My personal experience as a neurodivergent educator with ADHD further drives my advocacy for inclusiveness in mathematics education. Sharing my story during my presentation at the NCSM conference led to meaningful conversations and affirmations from others who identified with my experience. By embracing honesty and transparency in my professional journey, I aim to create an environment where vulnerability is seen as a strength and where teachers can confidently seek support for themselves and their students.

Liljedahl, P. (2023). *Building thinking classrooms in mathematics grades K–12: 14 teaching practices for enhancing learning.* Corwin.

Looney, S. (2017–2022). *Same but different math.* Looney Math. Retrieved on December 19, 2024, from https://www.samebutdifferentmath.com/

SanGiovanni, J. J., Katt, S., & Dykema, K. J. (2020). *Productive math struggle: A 6-point action plan for fostering perseverance.* Corwin Mathematics.

Seda, P. & Brown, K. (2021). *Choosing to see: A framework for equity in the math classroom.* Dave Burgess Consulting, Inc.

Interview by Karen Riley Jeffers | NCSM Eastern 2 Regional Director

(LEARNINGS FROM LEADERS CONTINUES ON NEXT PAGE)

CANADA REGION

BLAINE McINTOSH

Blaine McIntosh is a Divisional Mathematics Support Leader in the Winnipeg School Division. Blaine works closely with principals, teachers, and a team of department heads and support teachers. His focus is on helping schools craft their own improvement plans that put students' needs—and teachers' professional growth—front and center. In this conversation, Blaine shares insights on how asking "why" five times can help leaders uncover their true goals, why ego should take a back seat when providing support, and why showing yourself as a learner can transform a school's mathematics culture.

—Kyle Pearce, Canada Regional Director

Describe an impactful moment that helped shape the leader you are today.

One of the big moments that continues to guide my leadership thinking happened during my first year of teaching, when my principal, who was also my former English teacher, said, "You have to ask yourself 'why' five times." The idea is to keep pushing beyond the initial question—why do we do this? And then, why *that*?—until you get to the core purpose. It's stuck with me all these years because it reminds me not to jump into action without really knowing the root of what we're trying to change. Another guiding principle is remembering that it is not about you. Put your ego to the side. In other words, when you're in a support role, your agenda must come second to the needs of the people you're helping.

That's so important—focusing on the real reason behind any initiative. How do you see these principles—asking "why" and putting others first—shaping the way you approach district and school goals?

They shape everything we do. We constantly return to our "why" when discussing resources or new initiatives. For example, in Manitoba, we have our "Pillars of Teaching and Learning Mathematics" and the NCTM's "8 Effective Mathematics Teaching Practices." We always try to circle back to these overarching guides. Many resources and strategies out there are "good," but we only know if they're right for us once we articulate our deeper reason for using them in the first place. That's also where the "It's not about you" part comes in. The moment the support person imposes their agenda, you lose sight of the unique goals and context of each school or teacher.

What shifts have you noticed in your own practice since you first took on a leadership role?

Early on, I thought I knew the "right" approach for everyone. I had a list in my mind of what needed to be fixed and believed if everyone just did X, Y, or Z, things would improve. Now, I see that improvement is really about progress, not perfection. I'm far less worried about the specific goal a school or someone chooses. I'm more interested in helping them pick a goal and develop a plan to move forward. It's not about me dictating a formula for success. Instead, it's about supporting schools, teachers, and leaders in taking that first step—no matter how big or small—and celebrating the learning that happens when we try.

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LEARNINGS FROM LEADERS (CONTINUED FROM PREVIOUS PAGE)

That's a powerful realization. It suggests every school can take ownership of its own improvement journey. How do you help schools create mathematics plans without it feeling like just another form they fill out?
Exactly. We've probably all filled out school improvement forms that get filed away and never revisited. My goal is to make this work meaningful. A good mathematics plan is not about meeting a bureaucratic requirement; it's about identifying a real challenge in your context and taking steps to address it. We show schools how to use data and their own observations to choose a focus, then support them in taking actionable steps. If something does not work, that is okay—that is learning, too. The important part is they tried something. Even if it flops, you can adjust and try again.

COVID was a disruption that made it clear things are not static. So now, school improvement is less about saying, you are not good enough and more about recognizing that contexts have changed, technology has changed, and student needs have changed. We are all adapting—and that perspective can build a growth mindset in educators.

If, by the end of this year, you could point to one "win," what would you want that to be?
I would be thrilled if schools felt genuinely empowered to create and follow through on their mathematics plans—plans they see as truly theirs. If we get to a place where principals and teachers say, "This plan helps us, and we're making real progress," that is a huge victory. The plan itself might be small in scope—maybe focusing on problem-solving in one grade, for instance—but if it is driven by their context and leads to measurable steps forward, that's the win. Improvement does not have to be complicated or overwhelming.

By asking "why" five times, focusing on the people we support, and embracing our own learning curves, we can make steady progress in mathematics teaching and learning. I appreciate the chance to chat and look forward to continuing the work!

What advice would you offer a new or seasoned mathematics leader working through these same challenges in their district?
Show yourself as a learner. You might not be a mathematics specialist, but if you can walk into a room and say, "I'm learning about this mathematics practice, can I see how it looks in your classroom?" you immediately set a collaborative tone. Teachers want a leader who learns alongside them, not someone who stands at a distance with a checklist. That openness, plus a basic familiarity with guiding documents or best practices, is enough to spark meaningful dialogue and collective growth.

Interview by Kyle Pearce | NCSM Canada Regional Director

BREAKING BARRIERS: 2024 NCSM CONFERENCE

The 2024 NCSM: Leadership in Mathematics Education conference, held from September 23–25 in Chicago, Illinois, was a landmark event for educators and leaders in the field of mathematics education.

Hosted at the Hilton Chicago, the conference brought together a diverse group of professionals dedicated to advancing high-quality mathematics teaching and learning.

Notable Sessions

Throughout the conference, attendees had the opportunity to participate in a variety of sessions and workshops led by distinguished speakers and experts in the field. These sessions provided practical strategies and tools for improving mathematics education. Highlights included:

- **Opening Keynote:** The conference kicked off with an inspiring keynote address by *Denise Forte*, the CEO of The Education Trust. Forte is renowned for her advocacy work in education equity, focusing on policies that benefit students of color and those from low-income backgrounds. Her keynote set the tone for the conference, emphasizing the importance of bold leadership in disrupting the status quo and advocating for equitable educational practices.
- **Leadership for Better Thinking, Reasoning, and Problem Solving:** John SanGiovanni, a nationally recognized leader in mathematics education, conducted a session on effective leadership practices. He shared ways leaders can support and grow skills for better teaching and learning of problem solving.
- **Taking on the Math Fact Fluency Barrier:** Dr. Jennifer Bay-Williams, an early mathematics education expert, presented on ways to ensure every child has fact fluency, sharing instruction and intervention strategies.
- **Unapologetically Teaching Mathematics for Social Justice:** Dr. Kristopher Childs, an expert in mathematics coaching, and Dr. John Staley, former NCSM president, presented a session on providing students with an equitable and engaging mathematics classroom experience that impacts their lives.

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2024 ANNUAL CONFERENCE PHOTOS

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- **Occasioning Change:** Dr. Peter Liljedahl, author of "Building Thinking Classrooms," presented on strategies leaders can use to help teachers shift their professional growth goals.
- **Closing Keynote:** The conference concluded with a powerful keynote by *Brian Butler*, an accomplished educational consultant and author of "Every Student Deserves a Gifted Education." Butler's address focused on fostering collaborative school cultures that unlock every student's potential. Drawing on his extensive experience working with schools across the United States, Australia, and Canada, Butler emphasized the importance of viewing educators as catalysts for student empowerment. His insights into coaching and leadership provided a fitting end to a conference dedicated to transformative education.

All our sessions provided attendees with valuable strategies and tools to improve mathematics education, making the conference a rich learning experience for all participants.

In addition to the formal sessions, the conference provided ample opportunities for networking and collaboration. Attendees engaged in meaningful discussions, sharing their experiences and best practices. The vibrant city of Chicago, with its rich history of innovation and resilience, served as an inspiring backdrop for these interactions.

LOOKING AHEAD: 2025 NCSM CONFERENCE

Looking ahead, the 2025 NCSM: Leadership in Mathematics Education conference will be held from October 13-15 in Atlanta, Georgia. The Atlanta conference theme, *"Rise Up With Bold Mathematics Leadership,"* will focus on themes such as accelerating student learning, elevating mathematics instruction through bold leadership, and promoting equity in mathematics education.

Early registration is encouraged to secure your spot and take advantage of early bird rates. For more information and to register, visit the NCSM Website. Don't miss this opportunity to join fellow educators and leaders in advancing the field of mathematics education!

2024 ANNUAL CONFERENCE PHOTOS

JOURNAL OF MATHEMATICS EDUCATION LEADERSHIP

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Leadership in Mathematics Education

The Journal of Mathematics Education Leadership connects current research to practice on topics related to mathematics education leadership. Current and back issues are now available open access.

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2. A blinded Word file (.docx) as above but with author information and all references to authors removed.

For more information, check out the link to the journal's homepage above.

Check out the Summer 2024 Issue:

Vertical Lesson Study to Bring Coherence in Prioritizing Student Contribution and Voice

~Holly Tate, Jennifer Suh, Amy Christensen, Kaitlin Kaplewicz, Jacqueline Carlson, Jennifer Carter

In this article, the authors explore how Lesson Study as action research can build equitable classroom structures through discourse and the use of rich vertical tasks.

One Curriculum Committee's Perceptions of High-Quality Materials

~ Erica Mason, Camille Griffin, and Ga Kyung Jeong

This paper highlights aspects of the curriculum adoption process that may have previously been overlooked—the degree to which the curriculum committee has a shared view of material quality, including committee members' views about material appropriateness and the alternatives they would recommend for students.

NCSM AFFILIATES NEWS

NCSM PROUDLY SUPPORTS AFFILIATES ACROSS THE COUNTRY.

These affiliate organizations play a vital role in advancing NCSM's mission and vision through their local contexts. This month, we spotlight the *California Mathematics Council (CMC)*, one of the largest NCSM affiliate organizations.

The CMC boasts over 4,000 members in California and beyond. Additionally, CMC hosts over 20 of its own affiliates in California, where these smaller regional organizations contribute to and benefit from the work of the larger organization. The CMC offers numerous professional learning opportunities, including three major conferences. The CMC-South conference takes place in November in Palm Springs, drawing approximately 2,500 attendees. The CMC-North conference is held in December at the Asilomar Conference Grounds near Pacific Grove, attracting more than 1,200 participants. The CMC-Central conference is held in March in Bakersfield, with an estimated 800 attendees. CMC also recognizes outstanding contributions to mathematics education through various awards, honoring educators, student activities, administrators, and post-secondary professionals.

MA BERNADETTE SALGARINO
PRESIDENT CMC

Looking ahead to 2025, CMC has been awarded a Bill & Melinda Gates Foundation grant. This funding will help build awareness among system and building-level partners about high-quality mathematics materials and aligned professional learning. The grant will support several key goals, including:

- Communicating effectively with educators, parents, the public, and legislative bodies about the importance of teaching rigorous and equitable mathematics.
- Increasing the diversity of our membership and leadership within mathematics education at local, state, and national levels.
- Fostering an inclusive environment where every student can thrive in their mathematical journeys, with particular attention to BIPOC students, multilingual learners, and students with learning differences.

Members of CMC benefit from resources such as the monthly newsletter, the ComMuniCator, and access to position statements and other tools supporting mathematics educators. These resources are designed to ensure equitable and joyful mathematics education for all students.

For more information about CMC, visit their website, https://www.cmcmath.org/, or connect with them on X @CAMathCouncil.

With thanks to Ma Bernadette Salgarino, President CMC and Sean Nank, CMC NCSM Representative.

Joanie Funderburk | NCSM Affiliate Coordinator (2023–2025)

NCSM MISSION STATEMENT

NCSM is a mathematics education leadership organization that equips and empowers a diverse education community to engage in leadership that supports, sustains, and inspires high-quality mathematics teaching and learning every day for each and every learner.

NCSM VISION STATEMENT

NCSM is the premiere mathematics education leadership organization. Our bold leadership in the mathematics education community develops vision, ensures support, and guarantees that all students engage in equitable, high-quality mathematical experiences that lead to powerful, flexible uses of mathematical understanding to affect their lives and to improve the world.

High-quality leadership is vital to this vision. NCSM is committed to:

Developing and Informing Vision

- Provide leadership to influence issues and policies affecting mathematics education in ways consistent with the mission and vision of NCSM;
- Equip leaders to be critical consumers of educational information, research, and policy to become change agents in their communities;
- Support leaders to develop an actionable vision of mathematics instruction consistent with a view of mathematics as a sense-making endeavor.

Ensuring Support to All Stakeholders

- Develop networking and communication opportunities that connect the mathematics education community, as well as the broader education community;
- Equip leaders with the tools to create and sustain systems that fully align with the vision of mathematics and mathematics instruction promoted by NCSM;
- Equip leaders with the understanding, knowledge, and skills to continue their own personal growth, support emerging leaders, and further develop excellence in mathematics teaching.

Guaranteeing All Students Engage in Equitable, High-Quality Mathematical Experiences

- Provide advocacy and support regarding issues and policies affecting mathematics education in ways consistent with the mission and vision of NCSM;
- Provide resources for implementation of research-informed instruction to ensure students engage in relevant and meaningful learning experiences that promote mathematics as a sense-making endeavor;
- Advocate for each and every student to have access to rigorous mathematics that develops their understanding, skills, and knowledge, along with the confidence to leverage their learning, in order to improve their world.

ABOUT YOUR NCSM *Inspiration!*

The purpose of your NCSM *Inspiration!* is to advance the mission and vision of NCSM by informing the membership of the on-going activities of NCSM, by providing up-to-date information about issues, trends, programs, policy, and practice in mathematics education, and by promoting networking and collaboration among NCSM members and other stakeholders in the education community. *Inspiration!* is published electronically four times a year—fall, winter, spring, and summer—and is available to NCSM members only via the NCSM Website, as a benefit of your NCSM membership.

Inspiration! seeks articles on issues of interest to mathematics educators, especially K–12 classroom teacher leaders. All readers are encouraged to contribute articles.

Please send newsletter articles and comments to:
Heather Crawford-Ferre • hcrawford-ferre@mathedleadership.org

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