

Recommendation 3

Implementing Equitable Mathematics Instruction

<https://docs.google.com/document/d/1qALrTDPeMZHC0IXdOkvQ8q6q7eGgwJhshyKrab5D9MU/edit?ts=5ec80f85>

	Early Childhood and Elementary	Middle School	High School
Implementing Equitable Mathematics Instruction	Mathematics instruction should be consistent with research-informed and equitable teaching practices that nurture children's positive mathematical identities and strong sense of agency.	Mathematics instruction should be consistent with research-informed and equitable teaching practices that foster students' positive mathematical identities and strong sense of agency.	Classroom instruction should be consistent with research-informed and equitable teaching practices.
What partnerships should be fostered for educators' professional learning to strengthen understanding of mathematics and equitable mathematics teaching practices?			

From DeAnn Huinker to Everyone: (7:20 PM)

What [partnerships](#) should be fostered for [educators' professional learning](#) to strengthen understanding of mathematics and equitable mathematics teaching practices?

Please share your ideas below about partnerships, professional learning, equitable teaching, identity, and agency. Feel free to respond to each other.

(Just place your cursor, type your first name, and start typing.)

Dee: collaboration between mathematics teachers and ELL teachers, with the understanding that most students come with knowledge in their native language

Erin - For professional learning we need to start with making math PD a priority. We need to let teachers know that we are putting emphasis on this learning to make them stronger for their students .

that we need to let them access in that language. We can capitalize on what they know while helping learn both language and mathematics. Dual language!

Konnie Guthrie- If I am to provide a positive experience in math I must begin with the parents. I teach 6th grade and I already see too much-fixed mindset versus a growth mindset. When I hear students say How they are not good at maths always think to myself “Who told you that?”

Bina: collaboration while planning lessons and teaching would enhance collective efficacy. Developing math identity among students is vital, this is possible when the classroom climate is positive and have a growth mindset among learners and teachers.

Lori McDevitt - teachers at all grade levels, administrators, and support staff need to collaborate and be aware of research-based practices in math education. Parents need to be kept in the loop as to why we are teaching math the way it is now taught.

Sara - Professional learning must be made a priority for mathematics. It seems that vertical conversations are very helpful to draw out prioritized learning. Often there is not a solid sense of where students have come from, which leaves some serious untapped opportunities around agency

Nicole Rigelman - we should foster partnerships across schools and universities that are training future teachers of mathematics; supporting everyone with developing shared understanding and common learning focused on putting research-based and equitable teacher practices into practice; we should plan ongoing, job-embedded professional learning (e.g., lesson studies, learning labs) that engages all stakeholders from teachers to administrators, to instructional assistants, and community volunteers to support

Nicole B: I totally agree with this! Much easier to train teachers initially than undo entrenched practices later.

Alicia - Have an ongoing dialogue with post-secondary institutions, corporations, and military agencies; leverage community organizations

Mary - Hope for a K-12 collaboration across a district to foster that strengthen equitable math practices.

Brandi- We need to create partnerships between families and teachers. Teachers inside the schools hopefully are talking from grade to grade. I also hope that educators at other schools same grade as well as above and below.

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Kelly: We should be fostering partnerships amongst schools in a broad way. As a Teacher for Deaf students, we are constantly looking for new ideas and resources. Our school is also ECC, K-12, 12++, and residential, so having a relationship throughout the entirety of the school is important. Partnerships between/among content areas are crucial for real-life application.

Mandy - We should be connecting across grade levels to better understand progressions of standards. We also need to partner with universities to continue both pedagogical and content knowledge for our teachers. Teachers should partner with each other across schools.

Cara Littlefield -- For me as a coach, the biggest thing standing in teacher's ways is the curriculum they are forced to use. So partnerships with curriculum developers is essential.

Nicole B: Agreed. This is an issue at our school/in our district as well. Although our teachers have the option of teaching in a more effective way, it's hard to get them to move away from the textbook.

Lisa Hennessey--First and foremost, I think that we need to build capacity through teacher collaboration, PD around standard progressions with all grade-levels present, and a clear focus for the work around the SMP supported by coaches, families, and principals. We should focus on building partnerships with families around SMP and Mathematical Teaching Practices.

Lisa-Partnerships/relationships with parents to support their learning at home, relationships with colleagues to increase collaboration & relationships with students to build a rapport that is suitable for teaching and learning

Denise Svenson - How can we foster parent support for mathematical practices - take pressure off teachers to label and track - especially from the parents who want to make sure we recognize their child's 'advanced ability' or giftedness - the desire to have an edge over others.

Jolene Peterson - If teachers are to promote a positive math identity for children, teachers should learn about and identify those positive math identity activities. (Timed tests may not be positive depending on the administration of those timed tests, for example.) We should also seek to help parents and community members understand this shift so we can stop the "I wasn't good at math" syndrome.

Kendra- Professional cycles of learning with vertical teams where they collaborate to examine coherence between and within grades and identify areas in teacher practice that may widen the opportunity gap.

Lauren: articulation between teachers of various courses; Also, education of parents and community members is critical (many were in middle and high school at a time when there was singular focus on procedural knowledge) as many do not see the value and need for these types of adjustments.

Tim - Equitable - - using culturally responsive practices to foster learning

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Janel - partner with community (businesses, non profits, etc.)

Noe: Mentorship from different industries to connect math to real life experiences

Tansey: I am a MS principal. We have worked hard to overcome negative math talk with students and with parents. We have even toyed with the idea of getting signs (like the cardboard fans) that say "No Negative Math Talk!" and putting them up when a student starts talking negatively about their capacity for math. The same consideration is there with parents....it seems like in conferences, parents validate math as being hard and we want to be able to stop the negative talk and eliminate math as being hard for them and ergo, hard for their child.

Hsiao-Ting C. - Collaboration between students, teachers , parents and administrators.

Chris B -

Jane - book study on equitable practice & what that looks like; valuing parents input

Jenny - I think linking to community members so that students feel their identity is represented in the math classroom

Vanessa - Developing positive relationships are crucial to begin the conversation about equitable teaching practices. We must know and understand our students' beliefs as well as our own.

Tracy - To build equity we need to collaborate with grade level teachers. I would love to see more vertical alignment across grade levels. Teachers building students up to become mathematicians and understand it is okay to make mistakes. Also building problem solvers and working together.

Lori Williams - Wisconsin, Partnerships with NCTM state affiliates whose members may be able to support and provide professional development or provide spaces at conferences for NCTM speakers to present, share, and answer questions.

Michael De Antonio Jr. - Newark Public Schools - Newark, NJ

These unique times have presented new opportunities for professional development. A "partnership" that should continue to grow when things get back to more normal times is to continue to utilize these online methods to provide and obtain professional development.

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Jennifer - I think teachers need PD on what evidence-based equitable teaching practices are and how to implement them K-12.

Schruby - Inglewood Unified SD There has to be a grade level partnership so that

Teachers know what concepts look like at higher grade levels to show why skills are necessary and cannot be skipped or glossed over. Teachers can also share strategies and team teach. Also secondary teachers can visit the elementary classes to discuss what the next levels look like. In addition, get the science teachers involved for math applications.

Meredith-For students to have a math identity, we need to model (teachers and leaders) that we are all learning math...we have conceptions and by engaging in math learning, my conceptions are developing. I also think that for students to truly have a math identity, they must understand how their learning is applicable in the world around them. We must be teaching them strategies grounded in the rigor of the standards (conceptual, procedural, application).

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Tracy - we need to work together across districts with parents, teachers, and administrators to build an understanding of the importance of the time it takes to allow students opportunities to develop a deep understanding of mathematics concepts. Sometime, building schedules make it difficult to spend the adequate amount of time for students to interact with math.

Danielle - We need to be more efficient. As a first year teacher, I had no curriculum materials, and no experienced teachers to turn to. I had to just figure it all out from scratch, and that was extremely inequitable for my kids. Meanwhile, there are other districts with veteran teachers and purchased curricula and teams of people devoted to making sure things work. If we're serious about equity, we need to pay attention to the low hanging fruit. We should develop high quality curricular materials and make them widely accessible, and also make sure that teachers have PD on how to implement the curriculum. If low-income students are always getting new teachers and bad curriculum, their learning outcomes will never come close to that of high-income students.

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