

AM-ME Research Plan for Schools

A three year, *mixed-methods, critical participatory action* research project to develop a culturally responsive self-report measure of Black and Latino student math engagement, called the Adapted Measure of Math Engagement (AM-ME), is seeking a district partner.

What We Are Hoping to Achieve

The goals of this research project are to:

- Understand **Black and Latino students' engagement in math.**
- Adapt and refine a **self-report measure of student engagement** to better capture Black and Latino student's experiences.
- Understand how **students' math engagement supports academic and socio-emotional outcomes.**

How We Hope to Benefit Your Community

We hope that this research project benefits students, teachers, school administrators, district administrators, and the community by:

- **Conducting research *with* teachers and students**, not just *on* or *for* them to ensure that the measure developed and resulting findings reflect and meet the needs of your students. Teachers and students who participate in the critical participatory action research group will gain hands-on applied research experience and mentoring.
- Providing **data that center and uplift students' lived experiences in math**, which provides a deeper understanding of *how* students are engaged in math.
- Providing **actionable data for improving practices to support students' engagement** in math (e.g., cultural assets that support engagement, funds of knowledge that students bring to the classroom).

Research Activities for Participating Schools

In addition to professional development support and resources for supporting Black and Latino student engagement in math classes, the schools and participating administrators, teachers, support staff, students, and parents/guardians will receive financial compensation for their participation. **Each school will receive \$7,500 per year for their participation.** Each school will participate in the following activities (*timeline is negotiable depending on school schedules*):

- **Spring 2023–Spring 2025 (March 2023–May 2025):** One teacher and one student (supported by their parent/guardian) from each school will meet with the research team as well as teachers and students from other participating schools to make decisions on study design and activities. The group (known as the AM-ME Research Group) will meet twice a year to discuss and review study protocols, progress, and findings. Meetings will take place outside the school day; the total time commitment is approximately 40 hours per year. Stipends of \$4,000 per year will be provided to participants.
- **Spring 2023 (April 1, 2023–May 27, 2023):** A student self-report survey about engagement in math classes will be administered to all students in the school. The survey will be electronic

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Learn more about the Adapted Measure of Math Engagement at <https://www.childtrends.org/project/adapted-measure-of-math-engagement>.

and take roughly 5 to 10 minutes to complete; survey administration can take place during or outside of math classes. Incentives of \$10 gift cards will be provided to participants.

- **Summer 2023 (June 2023–July 2023):** 90-minute focus groups will be conducted with about 60 students (12 per school) and 45-minute interviews will be conducted with about 12 math teachers (2-3 per school) to understand engagement in math. Focus groups and interviews will take place outside of the school day. Incentives of \$50 gift cards will be provided to participants.
- **Summer 2023 (June 2023–July 2023):** 60-minute interviews with 30 students (6 per school) and 30-minute electronic content reviews with 12 math teachers (2-3 per school) will be conducted to review the student self-report survey developed to capture engagement in math. Incentives of \$50 gift cards will be provided to participants.
- **Fall 2023 (September 2023):** A student self-report survey will be administered for a second time to all students in the school. Survey will be electronic and take roughly 5 to 10 minutes. The survey can take place during or outside of math classes. Incentives of \$10 gift cards will be provided to participants.
- **Spring 2024 (February 2023–March 2023):** Additional 60-minute focus groups with 30 students (6 per school) will be conducted on their experiences with engagement in math. Focus groups and interviews will take place outside of the school day. Incentives of \$50 gift cards will be provided to student participants.
- **Fall 2024 (September 2024):** A student self-report survey will be administered for a third time to all students in the school. The survey will be electronic and take roughly 5 to 10 minutes to complete. Survey administration can take place during or outside of math classes. Incentives of \$10 gift cards will be provided to participants. Administrative data will be collected for all students who participated in the survey. Data may include: (a) attendance, (b) discipline, (c) math and science grades, and (d) Minnesota Comprehensive Assessments (MCAs) Math, Reading, and Science scores. Data collected is based on availability and discussion with district and school administrators.

Dissemination Activities for Participating Schools

Throughout the project, **the AM-ME Research Group will collaborate with schools to determine effective methods for sharing data and findings with the school and communities** to support their capacity to adjust practices in the classroom and school to better support Black and Latino student engagement in math classes. Potential avenues include:

- **Informal meetings:** Each year, the group will meet with administrators, teachers, support staff, and students as requested to provide updates on the project, including initial findings from the data.
- **Data workshops:** Each year, the group will meet with participating schools to share data and findings in practitioner-friendly formats.
- **Infographics and research briefs:** During and at the end of the project, the group plans to summarize data and findings in infographics and research briefs that can be shared within the participating schools and broader community.
- **Measurement toolkit:** At the end of the project, the group plans to create an online measurement toolkit that supports practitioners and students in understanding how to use the developed measures to support Black and Latino math student engagement.