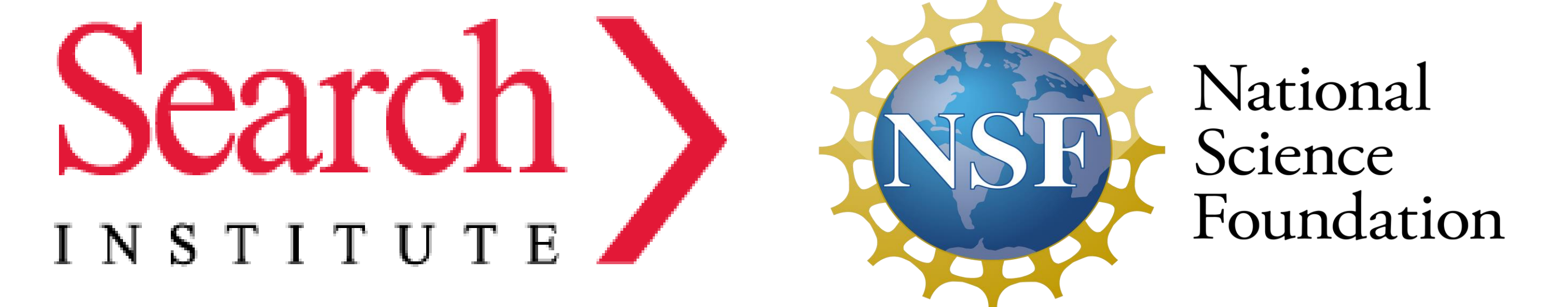


An Equity-Based Approach to Developing Self-Report Measures of Mathematics Engagement for Black and Latina/o Adolescents



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MOTIVATION

Math is a critical gatekeeper for access and success in STEM. To date, research and measures of Black and Latina/o student engagement is often based on deficit-based perspectives, which has failed to capture the many important ways that math can be engaging for these students.

Key limitations of existing measures of student engagement also include inconsistencies in the inclusion and structure of items, lack of domain specificity, and insufficient evidence to demonstrate that measures work equally well across important contextual factors, such as race/ethnicity and gender.

PROJECT GOALS

- Understand Black and Latina/o middle and high school students' engagement in math
- Adapt and refine self-report measures of student engagement to better capture Black and Latina/o students' experiences
- Understand how students' math engagement supports academic and socio-emotional outcomes

EQUITY-BASED APPROACH AND RESEARCH DESIGN

Culturally Sustaining Approach to Measuring Mathematics Engagement

- This project counters deficit narratives of student engagement by taking a culturally sustaining approach to the measurement of Black and Latina/o middle and high school students' math engagement.
- Our approach is based upon the urgent reality of the deep roots of racial/ethnic inequity within current educational systems and existing scholarship that has often ignored or misrepresented the experiences of Black and Latina/o students as "problems to be managed" rather than assets.

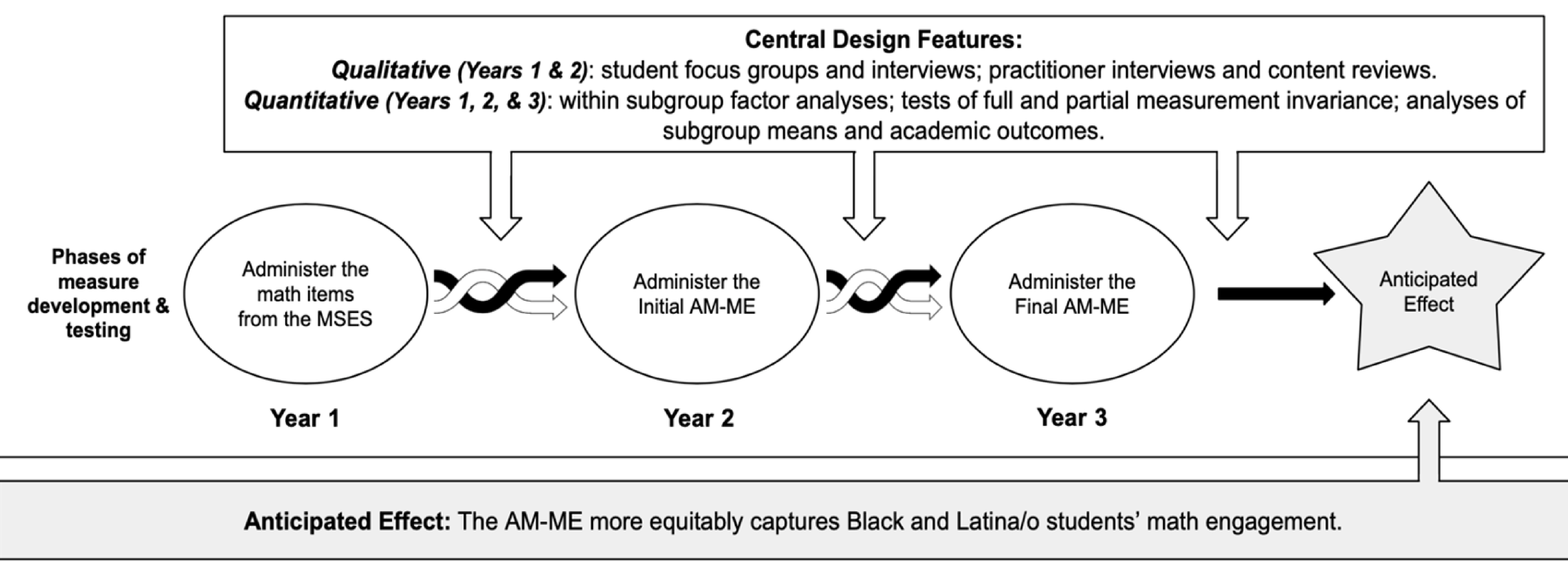
Critical Participatory Action Research Design

Central to our equity-based research design, is the development of the **Adapted Measure of Math Engagement (AM-ME) Research Group**, which consist of 5 researchers, 5 practitioners, and 5 students working collaboratively and in partnership to:

- conceptualize math engagement based on the lived experiences of Black and Latina/o students
- identify the dimensions of engagement that resonate with Black and Latina/o students
- develop measures that capture these dimensions

Project Assumption: Guided by a culturally sustaining approach, measures of math engagement should be adapted to center Black and Latina/o students' perspective and lived experiences.

Guiding Framework & Research Design: critical participatory action research and the Ecological Validity Model, co-develop the AM-ME with Black and Latina/o students and practitioners based on Black and Latina/o students' lived experiences.



ANTICIPATED DELIVERABLES

Informal Meetings: Each year, the research team will meet with administrators, teachers, support staff, and students to provide updates on the project, including initial findings from the data.

Data Workshops: Each year, the research team will meet with participating schools to share data and findings in practitioner-friendly formats.

Infographics and Research Briefs: Throughout the project, we plan 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, we plan to create an online measurement toolkit that supports practitioners and students in understanding how to use the developed measures to support Black and Latina/o math student engagement.

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