

# Centering the Experiences of Black and Latina/o Students in Math

The COVID-19 pandemic has significantly disrupted education, affecting student engagement in learning. These disruptions have further compounded existing racial/ethnic inequities in math, underscoring the critical importance of addressing barriers to engagement for all students. In the first year of a three-year study to rethink math engagement in a way that centers Black and Latina/o students' unique cultural experiences, values, and norms, we collected and analyzed data from student self-report surveys, student focus groups, and teacher interviews. We've defined math engagement as an active and joyful form of learning that can be demonstrated by listening, participating, being present, being willing to learn, collaborating with teachers and students, and feeling a sense of belonging. This resource can help students, practitioners, families, and community members support Black and Latina/o students to engage more deeply in math.

\*Note that all names have been changed to protect student, teacher, and school identities. Race/ethnicity and gender were self-described by each participant.

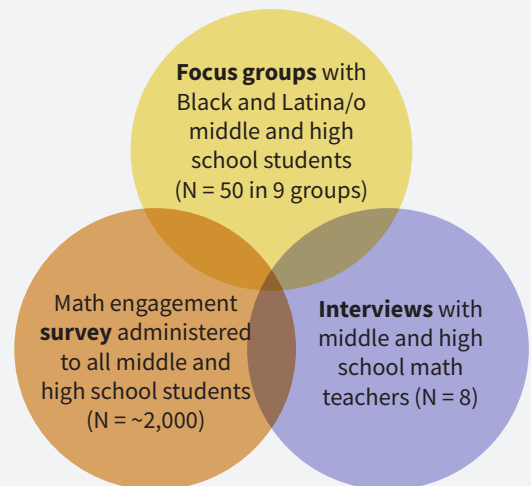
**Black and Latina/o students identify the following supports that help them feel engaged in math:**

**Family and community supports**

**Student-teacher relationships**

**Feeling motivated to do math**

## Data Collection



## Family and Community Supports

Every student is embedded in webs of relationships that can support their math engagement, including parents/guardians, caregivers, grandparents, siblings, cousins, and community supports. Black and Latina/o students receive support from their families and communities through:

- ▶ Helping with homework
- ▶ Meeting with teachers
- ▶ Emphasizing the value of education
- ▶ Providing encouragement
- ▶ Setting expectations

"I feel like I'm more engaged because of the expectations, like, my friends and, like, family hold for me. And that's, like, always on my mind like, "Stay focused. Stay focused. Stay focused. Don't slack. Don't slack. Don't slack."

– **Jacxs**, a Black male student at Walter Lincoln Hawkins High School

"Engage me to be better as a person and to make me and my family proud...I also try because my family didn't graduate, like, my parents. So me knowing math, I could help them. So that's what makes me, like, be focused on math."

– **Jess**, a Latina female student at Walter Lincoln Hawkins High School

- ▶ Bloomington has several resources that **leverage Black and Latina/o students' family and community assets** to support their math engagement:

**Culture-specific student clubs and safe spaces**

**District-level language supports**

**District-level cultural liaisons**

“They are paraprofessionals that we can lean on that were at the high school. We did have a Latinx liaison, a Black liaison, and a Somali liaison. So we had access to quite a few different demographics that we could reach to for assistance. So that was really helpful. But they weren't math teachers. They didn't have necessarily a math background.”

– **Shark**, a math teacher at Alexa Canady Middle School

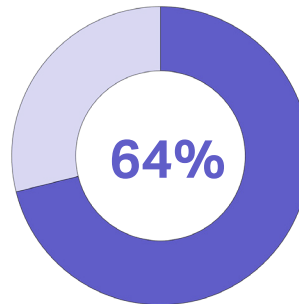
## Student-Teacher Relationships

Positive student-teacher relationships are one of the most important factors that shape students' math engagement.

- ▶ Black and Latina/o students **feel that they have a positive relationship with their math teacher** when their teacher:

**Expresses care**

**Provides support**



**64% of Black and Latina/o students** look forward to math class

### Expressing Care

Students share that they are much more likely to engage in math class if they can **connect with their math teacher**.

“She... cares to get to know you not just, like, on a school level but also, like, she cares to get you know-- to get to know you as a person, like, outside of school.”

– **London**, a Black female student at Helen Rodríguez Trías High School

### Providing Support

Students are more likely to engage fully in class when they have the **right amount and kind of support**. Alternatively, students **shut down and choose to disengage** when they feel like they are not getting the support they need from their math teacher.

“You're like, I feel like I don't want to ask my math teacher too much questions because like by the second question I ask, she like gets like irritated.”

– **Emily**, a Somali female student at Katherine Johnson Middle School

# Feeling Motivated to Do Math

Math motivation is crucial for fostering math engagement as it drives students to learn math concepts and participate in math classrooms.

▶ Black and Latina/o students share how **expectations affect their motivation to do math.**

Expectations were primarily external rather than self-imposed.

Expectations were set by teachers, classmates, or family.

Expectations had positive and negative impacts on motivation.

▶ A key part of math motivation, which researchers call *math utility*, pertains to **how useful or relevant math is**. Black and Latino/a students describe math motivation as including:

The importance of good math grades for getting into college

Their future career

Wanting to have or be good with money

▶ **93%** of Black and Latina/o students say they **put effort into learning**, and **86%** say they **keep trying even when something is hard.**



“When my, my mom sometimes checks my grades. Sometimes, if I fail on a test, she’s like encourages me to do better and, like, do more homework. That way, you can get that grade up, and then probably get a reward after.”  
- **Hector**, a Hispanic male student at César Milstein Middle School

“More so it’s just, like, like, yeah, getting it done so I can get my grade up in there, so it can help me, like, with getting into colleges and stuff like that.”  
- **London**, an African American female student at Helen Rodríguez Trías High School

*This resource is part of the Adapted Measure of Math Engagement project.*

## Methods

The team conducting this project includes students and teachers from Bloomington public schools; and researchers from Child Trends, Search Institute, and McREL International. Starting in spring 2023, we collected data about Black and Latina/o math student engagement through 8 math teacher interviews, 9 focus groups consisting of 50 Black and Latina/o middle and high school students, and survey responses from more than 2,000 middle and high school students.

**Read more** and access resource developed during this study by visiting: [LINK TO PROJECT PAGE](#)

## Acknowledgements

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