

Consolidated Product Outline Draft For Internal Use Only

Note: Here is the general outline of our 2-3 page product. Below, you will find a written draft of the introduction and student-teacher relationship section.

- I. Introduction
 - II. Student Teacher relationships are key to math engagement
 - III. Family support is also key to math engagement
 - IV. Working With Peers or Friends
 - V. Understanding Math
 - A. Students are motivated to learn math.
 - VI. Conclusion
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Introduction

SECTION TITLE: *What is Adapted Measure of Math Engagement*

This project aims to understand how Black and Latino students feel engaged in mathematics education and to develop a new survey that reflects the experiences of students in Bloomington public schools. We are a team of researchers including students and teachers from Bloomington public schools and researchers from Child Trends, Search Institute, and McREL international. Starting in the fall of 2022, we collected data through interviews with students and teachers, focus groups, and a survey. We conducted eight math teacher interviews and nine focus groups consisting of 50 total students across. In addition, more than 2,000 middle and high school students across the school district completed a survey asking about their experiences of engagement with math. Data from this project will be used to develop a new survey of math engagement that will better reflect the experiences of Bloomington Public School Students. This report summarizes some key findings made during this project.

Student-Teacher Relationship Section

SECTION TITLE: *Student Teacher relationships are key to math engagement*

BOX WITH STUDENT AND TEACHER QUOTES:

- “They always encourage us and tell us to do better...” - Student
- “...at the end of the day, they just want us to be great.” - Student
- “Just meeting them as a human first.” - Teacher

DEFINITION:

This project is funded by the National Science Foundation, grant #2200437. Any opinions, findings, and conclusions or recommendations expressed in these materials are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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

Adapted Measure of Math Engagement

This theme refers to experiences and perceptions of interactions between teachers and students within the math classroom.

Students may experience this positively, including instances where teachers establish personal connections with students, foster a sense of community, provide support to students, express care, and expand possibilities. Students may also experience this negatively, including instances where students face difficulties, conflicts, perception of favoritism, or other negative dynamics with their teachers.

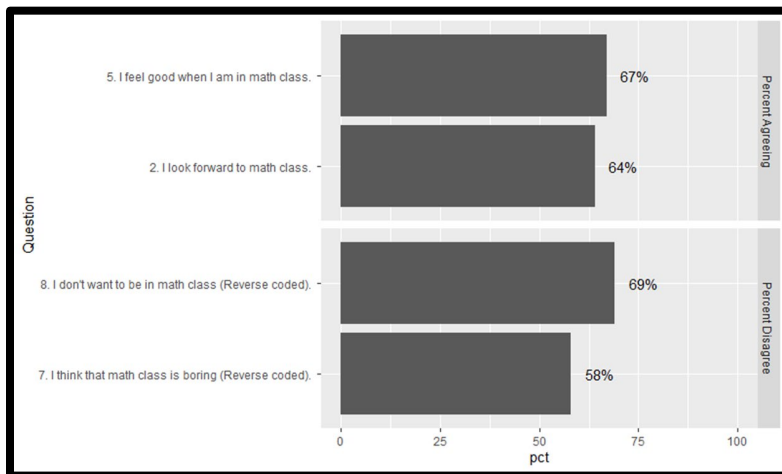
FREQUENCY OF THEME:

QUALITATIVE:

This theme was one of the most commonly mentioned aspects of engagement in math. During interviews and focus groups, this theme was mentioned more than 180 times (more than any other theme). In the survey, students were also asked several questions about how they felt about relationships with their teachers in math class. The graph below shows how students responded to a few survey questions relating to this topic.

QUANTITATIVE:

- 64% of students reported that they look forward to math class.
- Graph:



FINAL THOUGHTS:

Despite these results, the research group felt that this theme was not fully represented in existing survey questions, which is one of the reasons that the AMME survey development is important.