



## Enhancing Engagement and Conceptual Understanding of Fractions Using the Model Mathematics Education Curriculum

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NSF Award Number: 1949122

Dates: 2020 to 2024

Project type: Developing and Testing Innovations

Project URL: [Modelmemath.com](http://Modelmemath.com)

Project Overview: We are developing and testing a Universally Designed fraction game and wrap around curriculum for students with learning disabilities and mathematics difficulties.

**ModelME significantly increases students' conceptual understanding of fractions. Students with and without disabilities benefit equally from ModelME.**

### Lessons Learned & Insights Gained

*Mixed methodologies, including data analytics, revealed conceptual growth of students and also feasibility of the program for teachers. These methods focus on the process, as opposed to the products, moving away from positivist interpretations of outcomes for students and teachers. Conceptual growth of students with disabilities matched that of students without disabilities. At the same time, the pressures and inequities placed on our partner schools by COVID precluded robust opportunities for our team to learn with and from students and teachers before the major development work of the game and curriculum took place. Current iterations of the game and curriculum have incorporated partner ideas and identities to expand the robustness of the game and*

### Equity

*We center disability as an identity – as opposed to the “typical” learner - in our game through the use of Universal Design For Learning, which we tested in inclusive, whole class settings. Students with disabilities' thinking is also centered in the wrap around curriculum. For example, we elevate the diversity and power of students' thinking, whether those strategies are supported with drawings, models, or symbols. This celebrates and represents the diversity of students' experiences and ways of reasoning as opposed to reinforcing ability hierarchies and deficit language. It also positions students with disabilities as knowledgeable in the classroom, which historically is not the case for these students.*

### New Challenges & Next Steps

- *Scaling the program with additional school and district partners in several states.*
- *Incorporating space for local context within the curriculum to front students' lived experiences as a resource for learning.*