THE MATH NARRATIVE PROJECT

BranchED

About our project

We led professional development among 30 educators on math relevance, the value of mistakes, and help-seeking; and provided implementation opportunities through mixed reality simulation. We assessed impact through pre- and post-surveys and a focus group. We are currently field-testing resources (results forthcoming).

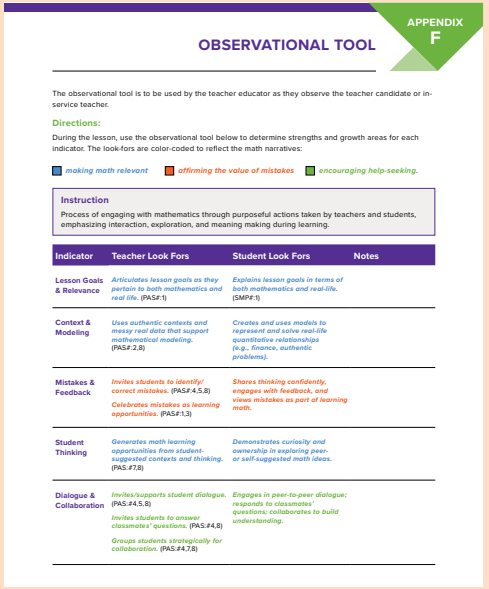
Participants from the professional development reflect on their experiences and the importance of math narratives.

Thank you for your interest in our Beyond the Numbers: Shaping Student Success through Math Narratives in Action Toolkit. We invite you to complete this form to be notified when the final toolkit is released.

Top learnings about impact

Our field test examines how narrative-based framing influences educators' confidence, beliefs, and instructional practice. We hypothesize that reinforcing these narratives, in a systematic manner (self-assessment, reflection, application and observation) will increase educator self-efficacy and promote the use of the math narratives.

A professional development survey provided a baseline. Participants reported strong agreement that the narratives were relevant to their roles. They also affirmed the role of math narratives in supporting student engagement and success in the math classroom (pre 2.0; post 3.2 – 4 point scale). They also identified strategies they plan to apply, indicating early shifts in confidence and readiness to change practice.



APPENDIX F

OBSERVATIONAL TOOL

The observational tool is to be used by the teacher educator as they observe the teacher candidate or in-service teacher.

Directions:

During the lesson, use the observational tool below to determine strengths and growth areas for each indicator. The look-fors are color-coded to reflect the math narratives:

making math relevant | affirming the value of mistakes | encouraging help-seeking.

Instruction

Process of engaging with mathematics through purposeful actions taken by teachers and students, emphasizing interaction, exploration, and meaning making during learning.

Indicator	Teacher Look Fors	Student Look Fors	Notes
Lesson Goals & Relevance	Articulates lesson goals as they pertain to both mathematics and real life. (PAS#:1)	Explains lesson goals in terms of both mathematics and real-life. (SMP#:1)	
Context & Modeling	Uses authentic contexts and messy real data that support mathematical modeling. (PAS#:2,8)	Creates and uses models to represent and solve real-life quantitative relationships (e.g., finance, authentic problems).	
Mistakes & Feedback	Invites students to identify/correct mistakes. (PAS#:4,5,8) Celebrates mistakes as learning opportunities. (PAS#:1,3)	Shares thinking confidently, engages with feedback, and views mistakes as part of learning math.	
Student Thinking	Generates math learning opportunities from student-suggested contexts and thinking. (PAS:#7,8)	Demonstrates curiosity and ownership in exploring peer- or self-suggested math ideas.	
Dialogue & Collaboration	Invites/supports student dialogue. (PAS:#4,5,8) Invites students to answer classmates' questions. (PAS:#4,8) Groups students strategically for collaboration. (PAS:#4,7,8)	Engages in peer-to-peer dialogue; responds to classmates' questions; collaborates to build understanding.	

Six educators are now field testing the full toolkit. The self-efficacy tool and reflection template measure changes in educators' beliefs and perceived readiness to implement narrative-aligned practices. The POP Cycle observation tool includes concrete, observable "look-fors" in teacher actions and student behaviors.

Together, our findings will measure changes in emotions, beliefs, instructional behaviors, and narrative uptake in classroom settings.

Top learnings about process

Co-designing with practicing teachers strengthened the clarity and credibility of the observation tool. Structured reflection cycles, self-efficacy, reflection, observation, and dialogue are essential for helping educators surface their beliefs and connect them to instructional practice. A challenge: Supporting educators from valuing math narratives conceptually to implementing them intentionally in their classrooms.