

Math Engagement Results Meaning-Making Themes to Categories

This activity “Math Engagement Qualitative Results Meaning-Making (themes --> categories)” was done in the Analyze - Year 1 qualitative results group meaning making meeting (July 2023), a meeting in the *analyze* stage of CEnR. The goals of the activity were:

- To engage our student and teacher partners in conceptualizing what our topic of interest (i.e., math engagement) is.
- To practice making meaning of data. Specifically, this activity is a light-touch version of thematic analysis.
- To utilize the data we collected from student focus groups and teacher interviews.

Activity instruction:

- We’ll divide into 3 teams (each with 1-2 students, 1-2 teachers, and 1 researcher). This allows time and space for everyone to contribute.
- Remind the group of the activity that we did last time (Partner - what is math engagement activity)? That was prep for the work we'll be doing today.
- Give each group a digital placemat (example screenshot below) and 20 themes.
 - The themes came from our student focus groups and teacher interview. Each little square (Post-it note) contains a theme. They are color coded by the frequency that they appear in our data.

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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

<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p>Parking lot</p> 
<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p><i>insert bucket name</i></p> <p>insert bucket definition</p> 	<p>This is not related to math engagement</p> 

themes from our student focus groups and teacher interviews

School and class schedule	Need for multiple instructors	Technology resources	Supports from peers or friends	School safety	Disparities in representation and access to math	Extended family or community supports	Family obligations	Negative teacher-student relationships	Math people are white	Math people enjoy math	Feels discouraged or challenged	Feels dumb	Feels isolated	Focused in class	Completes work	Works with peers or friends
School-based programs	Basic resources	Classroom management and structure	Differentiated learning strategies	Teacher personality	Guardian supports	Sibling supports	Impacts of COVID-19	Positive teacher-student relationships	Math people have math careers	Physical features of math people	Mental and physical capacity	Feels judged	Prefers to work alone	Distracted in class	Answers questions	Helps others
Learns from mistakes	Personal motivations for academic performance	Engagement for future aspirations	Instruction style	Math people can be anyone	Thinks through math problems	Feels motivated	Understands math	Social, personality features of math people	Feels math is relevant	Receives rewards	Enjoys math	Feels bored	Asks questions (or for help)	Pays attention	Listens in class	

Adapted Measure of Math Engagement

- As a group, your task is to group the themes into categories. For themes that go together, move them into a yellow square (bucket).
 - Each group has a handout of the 20 themes and short descriptions for each theme. If you need more information about any of the themes, ask one of us (researchers) and we can help you look up the quotes associated with a theme.
 - *Note, if you are unsure about a theme, you can put it in the “parking lot” box for the meantime.*
 - *Also note, if you think a theme doesn’t make sense, you can put it in the “this is not related to math engagement” box.*
- Once you have a grouping, write a “title” (bucket name) that is one to two words that describe the themes in the group as well as a one to two sentence description of how the group is related to math engagement.
- If you have time, walk around the room and see what other groups did for their placements and definitions. Feel free to ask questions.
- If you need more information about any of the themes, ask one of us (researchers) and we can help you look up the quotes associated with a theme.

(After a small break)

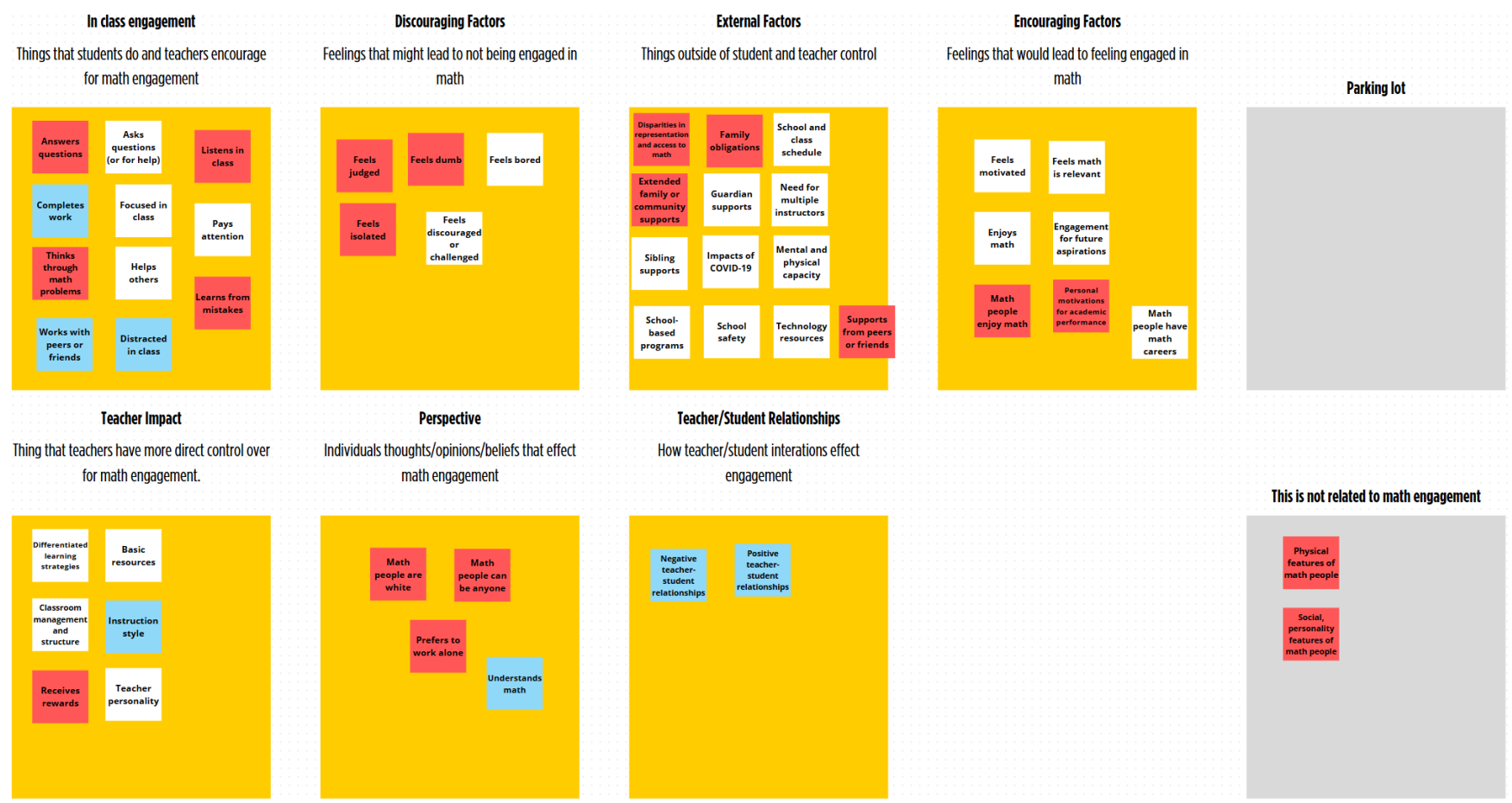
- Next, we have 20 additional themes for you to consider. Note that you can change your groupings if the ones you came up with last time no longer work well.
 - Do any titles (1-2 words) need to change? Write 1-2 sentence definitions for any new groups and modify any existing definitions to ensure they match the themes you've included.

(After a small break)

- Next, we have the final 11 themes for you to consider. Note that you can change your groupings if the ones you came up with last time no longer work well.
 - Do any titles (1-2 words) need to change? Write 1-2 sentence definitions for any new groups and modify any existing definitions to ensure they match the themes you've included.
- If you have time, walk around the room and see what other groups did for their placements and definitions. Feel free to ask questions.

Adapted Measure of Math Engagement

Example outputs from a small group



Adapted Measure of Math Engagement

(After a small break)

- Now, we will work as one large group.
- Each team will share their theme groupings and describe the themes within them. As each team is sharing their theme groupings, the other teams will take note of:
 - What similarities you see
 - What differences you see and things you might change
 - Additional questions you have

(After a small break)

- We will work as one large group.
- We will work with a new placemat to capture the final theme groupings by placing theme groupings (and themes) that are similar across the three teams on the placement.
 - Discuss remaining theme groups (and themes) from each team and where they fit on the placemat:
 - Can any of these remaining themes or groupings be combined?
 - Should any remaining groupings stay on their own?
 - Do any new groupings need to be made?