

Student & Teacher Cognitive Interview Protocol Fall 2023

Overview

- **Objective:** Understand how middle and high school students interpret survey items developed to capture their engagement in math
- **Time Required:** 60 minutes in Fall 2023
- **Facilitators:** At least two facilitators are needed.
- **Structure:** Semi-structured interview
- **Participants:** Middle and high school students, math teachers
- **Incentives:** \$50 gift card
- **Supplies:** Audio recorder and device that can connect to the Internet
- **Location:** In-person and/or virtual

Prior to the Interview

- For student participants, obtain parental consent and student assent forms.
- For teacher participants, obtain consent forms.
- Share information with participants about when and where the interview will be occurring.

Introduction

Welcome. Hello, my name is [SAY NAME] and I am [INSERT RELEVANT POSITION]. [Introduce other staff who are present.] Child Trends, Search Institute, and McREL International, which are non-profit education research organizations, are partnering to understand your engagement in math. This interview is part of a research study. The purpose of this research is to better support Black and Latino students' engagement in math. We think the best way to do that is to listen and learn from the experiences of individuals, like yourselves. Our conversation today will last about 60 minutes.

Informed assent. Participation in today's conversation is voluntary. Perspectives and experiences that you share today will be kept confidential. This means we will not tell anyone outside of the researchers on this study what was said in the interview, and we will not use your names in the written report for this study. You will not benefit personally from participating in the interview. You may feel uncomfortable answering certain questions, but you may skip or refuse to answer any questions you are not comfortable answering or leave the interview at any time. If you would like to leave the interview, please let me know. Your decision to participate will not have an impact on your experiences in school. You can skip any question you do not want to answer. We would like to record the conversation today for our records.

Are you willing to be recorded?

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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

If the participant is not willing to be recorded, ask if they would be willing to proceed with the interview without recording it. Instead, the facilitator will take notes during the discussion. If this option is acceptable, document how the interview was processed on your notes.

Do you have any questions?

If the participant agreed to be recorded, say the following: Since you have agreed to be recorded, I will need you to provide your consent verbally when I turn on the recording.

Turn on record and ask the following: Do you agree to participate in this interview as I have described it to you, including agreeing to be recorded?

The participant should say “yes” into the recording. Thank the participant and continue with the interview.

Ice Breaker

Use one of the two sets of questions detailed below based on participant type.

For Students

Let's start by getting to know each other. Feel free to share only to the extent you feel comfortable.

1. What made-up name would you like us to use when talking to you during this interview?
2. What are your preferred pronouns?
3. What grade are you in?
4. How do you identify in terms of gender?
5. How do you identify in terms of race/ethnicity?
6. Do you like math?

For Teachers

Let's start by getting to know each other. Feel free to share only to the extent you feel comfortable.

1. What made-up name would you like us to use when talking to you during this interview?
2. What are your preferred pronouns?
3. What grade do you teach?
4. How long have you been teaching?
5. How do you identify in terms of gender?
6. How do you identify in terms of race/ethnicity?
7. Why did you become a math teacher?

Interview Questions

I want us to discuss the survey that we developed to capture your engagement in math and gain your feedback on it. I have some sample questions for you to try out. We're interested in how you

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get your answer more than what your actual answer is. So, for example, we want to know what you're thinking about when you hear the question, what pictures you see in your head, what examples you think of in your mind, and what the words mean to you.

As we go through each question, I'll ask you to read the question and think aloud about each question. I'll also ask you to identify any words that are difficult. Your feedback will help make sure these survey questions make sense to other students.

Let's start with an example. *Demonstrate reading the first question and thinking aloud about it. Any questions?*

Once the participant's questions have been answered, proceed through the list of survey questions. Ask participants to read each question and think aloud. Encourage participants to identify any difficult words. Cover as many questions as possible.

Great! Let's start:

- INSERT QUESTIONS

Conclusion

Thank you for your participation today. If you have any questions, concerns, or additional information you would like to share, email Samantha Holquist at sholquist@childtrends.org. Her name and contact information also are included on your consent form. *Stop recording. Hand out gift card.*

Probes for Measurement Items

Think Aloud Probes

- In your own words, what do you think this question is asking?
- Tell me what you are thinking.
 - I noticed you hesitated before you answered – what were you thinking about?
- How would you put this in your own words?
- What does this question mean to you? What did you think of when answering this question?

Understanding Probes

- Can you repeat the question I just asked in your own words?
- Was there anything confusing about this question?
 - How would you change the question to make it clearer?
 - Would this question be easier to understand if it was phrased this way instead: <insert question>?
- What does the word <term> mean to you as it is used in the question?
 - How would you change <term> to make it clearer?

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- Tell me what you were thinking when I asked about <topic of question>.

Retrieval Probes

- Before I asked you about <topic of question>, how much had you thought about it?
- How much do you feel you know about <topic>?
- How easy or difficult is it to remember <topic>?
- You said <response option selected>. How sure are you of that?

Judgment Probes

- How comfortable did you feel answering this question?
- Did this question feel awkward?
- Did this question feel inappropriate?
- How well does this question apply to you?
- Is your answer always the same or would it vary?

Response Probes

- Were you able to find your first answer to the question from the response options shown?
- You said <response option that they selected>. How well did that option accurately reflect the answer you wanted to give?
- Was there an answer you wanted to give that was not available in the response options?
- Were there response options that didn't make sense to you?
- How did you differentiate between response options?

Adequacy of Content Probes

- What do you think about this survey?
- This survey was about <topic of survey>. Was there anything not included in these questions that is important to you regarding <topic>?