

## Relational Interactions: Definitions and Examples

Dimension	Definition	Negative Example	Positive Example
Addressing Behavior	Includes responses to some form of student behavior. Calling on a student would not be included unless there was some relational aspect.	Teacher separates a student from peers and limits access to instruction	Teacher praises the good behavior of a student
Framing Mathematics Ability	Includes comments that frame students' general capabilities to do mathematics. Instances must include broad comments rather than a specific assessment of a contribution.	Teacher dismisses students' ability to do mathematics	Framing difficult mathematics as something students can understand and do successfully
Acknowledging Student Contributions	Includes a teacher's response when it values/devalues or praises/disparaged the students' contribution. These are teacher responses to specific student ideas, work, or talk rather than broader commentaries on student ability.	Dismissing student thinking and positioning it as deficient mathematically	Praising student thinking and encouraging students to share their strategies
Attending to Language and Culture	Includes efforts to reference cultural or everyday situations, including embedding math problems within familiar situations. The same would be true for any negative references to students' culture or everyday lives that might reflect deficit thinking. Includes shifts in language practices that use more informal or cultural forms of speech as well as body movement or positioning.	Teacher misses mathematical contribution of the student because they correct grammar, leaving valuable mathematics unaddressed	Drawing on students' everyday lives in designing problem contexts
Setting the Emotional Tone	Includes teachers more generally stating expectations, preempting behavior, or creating an emotional space for students. This is not a specific response to students as are addressing behavior and acknowledging student contributions.	A teacher preempts behavior problems by threatening students that if they misbehave during the lesson, they will be removed from the classroom.	A teacher tells a personal story about struggling to understand mathematics and finding success. He encourages student to do the same.