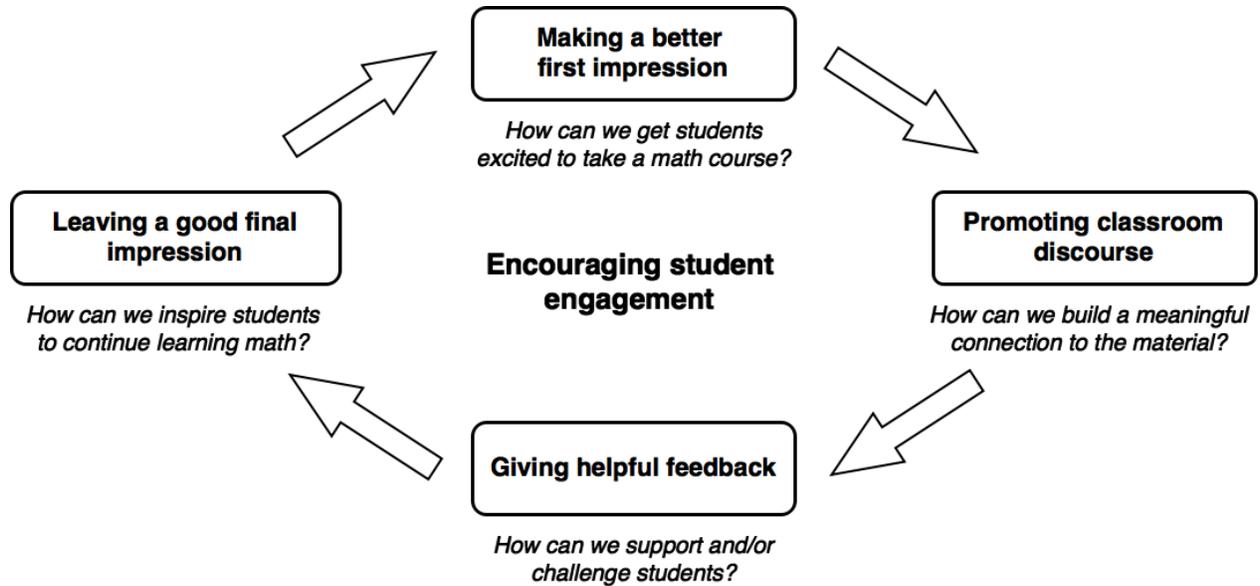


Encouraging student engagement through small changes to the language we use in a first-year math course

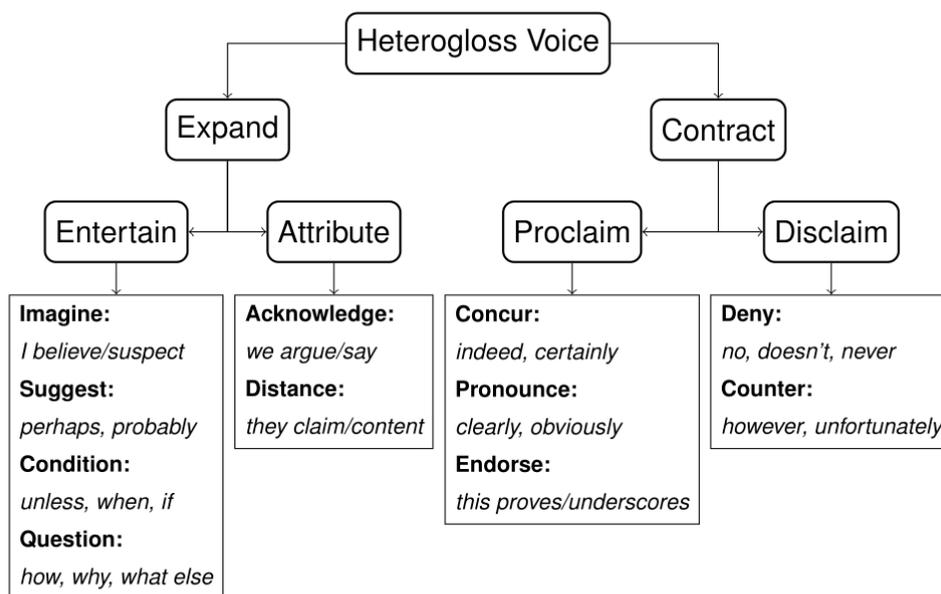
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Promoting Classroom Discourse

Monogloss voice is used to present the standardized forms of mathematical constructs. It is necessary to ensure consistency and rigour, but can sound impersonal or report-like.

Heterogloss voice is used to convey the diverse expressions of mathematical meaning. It grounds a proposition in the personal subjectivity of the speaker and engages the listener at different levels. Heterogloss voice can be used to promote and steer conversations with students.



Adapted from Mesa, V., & Chang, P. (2010). The language of engagement in two highly interactive undergraduate mathematics classrooms, *Linguistics and Education*, 21 (2), 83-100.

Giving Helpful Feedback

Statements of Caring (neutral)

- ➔ Let's stay in contact to discuss how you are doing with the material.
- ➔ You are a talented student. I am glad you are taking my course.
- ➔ I can see that you are working hard to learn these concepts.
- ➔ I understand that you probably have a lot of work in your other courses right now.

Statements of caring are a typical component of positive feedback and can help build the student-instructor relationship. However, this is somewhat orthogonal to the primary goal of feedback, which is to bridge the gap between current understanding and expected learning outcomes.

Comfort-Oriented Statements (NOT helpful)

- ➔ Not everyone is a “math person”; your strengths just lie in other subjects.
- ➔ I'm going to give you some easier questions to work on instead so that you can get more comfortable with those skills.
- ➔ I won't call on you directly in class because I don't want to add extra pressure by putting you on the spot.
- ➔ Maybe you just need a little more time to finish the assignment; you can have until Monday.

When students receive comfort-oriented feedback, they perceive their instructor as having lower expectations and investment. They feel significantly less encouraged and motivated, and expect to receive a lower final grade in the course.

Strategy-Oriented Statements (MOST helpful)

- ➔ I want you to consider working with a tutor or with another student from class.
- ➔ I will make a point of calling on you more in class to ensure you are staying on track.
- ➔ I'm going to give you some more challenging questions so that you can learn to apply these skills to new situations.
- ➔ If you break down the assignment into manageable pieces and work on one each day, you will be able to complete it on time.

Students who receive strategy-oriented feedback have more positive perceptions of their instructor's expectations and investment than those who receive only statements of caring. The use of effort management strategies is correlated to motivation and is a significant predictor of achievement.

Pokay, P., & Blumenfeld, P.C. (1990). Predicting achievement early and late in the semester: The role of motivation and use of learning strategies, *Journal of Educational Psychology*, 82 (1), 45-50.

Rattan, A., Good, C., & Dweck, C.S. (2012). “It's ok — Not everyone can be good at math”: Instructors with an entity theory comfort (and demotivate) students, *Journal of Experimental Social Psychology*, 48 (3), 731-737.