



## Modeling Imperfect Communication

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### Extended Abstract

Modeling imperfect communication can be used as a classroom tool to get students comfortable talking and asking questions about topics they don't know well, and to provide easy, low-stakes practice in constructive criticism. By having an instructor purposefully present a topic badly and then invite students to provide feedback and suggestions, it helps set the tone for open discussion. This also allows the instructor to give guidance for appropriate and useful feedback. My co-instructor and I successfully used this tool to set the tone on the first day of an interdisciplinary research-focused undergraduate lab course. Students from a variety of backgrounds in terms of year, major, and experience were put into groups to design and carry out a computational biology research project. One of the major goals of this course was to teach and facilitate interdisciplinary communication, and lab presentations with peer feedback were included throughout the course. We expected that all students would be coming into the course unfamiliar with some aspects of the project, so having them willing to speak up and answer questions where they didn't understand, and point out where presentations were confusing, was very important. In this workshop I walked participants through an example of imperfect communication as I used it in this lab course, providing the same guidance and instructions given to the students. We discussed strategies to implement this in other courses and recommendations for guiding peer feedback.

I used the following general structure to incorporate this teaching tool into my own course and recommend this as an outline that could be applied across settings. First, I discussed ground rules for participation and discussion in the course. This included statements about establishing a supportive and respectful tone for the course, and the importance of allowing everyone to be heard. I explained that we were all beginning with things we did not already know, and the value of recognizing that and being willing to speak up and ask questions. Second, I emphasized the importance of building skills in both oral communication and peer feedback and reminded students that these would be practiced throughout the course. I discussed how to give constructive feedback on presentations, providing a handout with examples for the students. Third, I presented a brief selection of background material in the form of a presentation with slides but did so purposefully badly. I told the students at the start that this is what I was doing and had them fill out feedback forms as I talked (and for a few minutes afterwards) to record what was confusing and their suggestions for improvement. In modeling imperfect communication, I included things such as undefined acronyms and technical jargon, minimal context, fast pacing, information shown on slides but not explained, and alienating statements such as "as I'm sure you already know". Finally, this was followed by open discussion in which the students gave their feedback on what was confusing, and we discussed as a class what could be improved. This also provided an opportunity to have the students practice phrasing their suggestions in a constructive manner.

I recommend several tips for implementing this communication tool to help it succeed in the classroom. Explain to the students what you are doing and why, to set the tone, and to emphasize that it is expected that they are going to struggle to follow the material presented in this specific example. Prepare a script for the imperfect

communication example. This ensured I presented the way I intended, and served as a visual reference to the students as they filled out their comments at the conclusion of the talk. Although I found that students were eager to point out places to improve, keeping to a planned script also prepared me with points ready to bring up had I needed to start the discussion. Finally, following up is critical. Following this exercise, I presented the information covered in the imperfect example again but did so carefully and with intent to teach effectively, being sure to address places where students had been confused.

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