

# Presentation skills for graduate students

DANIEL P. RICE AND JOHN NOVEMBRE  
UNIVERSITY OF CHICAGO, DEPARTMENT OF HUMAN GENETICS

## Goals

The aim of this two-day workshop is for graduate students to spend dedicated time practicing the fundamental skills of oral presentations. These skills are essential for professional development, but rarely taught explicitly. We also introduce students to a variety of resources that they can use to plan their own presentations after the workshop.

The primary activity of the workshop is for students to prepare a five-minute talk, without slides, aimed at an educated, non-scientist audience. We opted for no slides because effective slide design is a distinct skill, and because students often spend too much time preparing slides and too little time on organization and delivery. We chose a non-scientist audience to reduce the burden of explaining technical topics, and because our students wanted to practice for outreach activities.

## Learning objectives

At the end of the workshop, students will be able to:

1. Identify principles of effective organization and delivery for scientific presentations
2. Apply these principles to plan, deliver, and revise a short oral presentation
3. Give constructive peer feedback

## Lesson plan

---

### Day 1: Principles and planning

**Preparation:** Before the workshop, share the talk-planning activity with the students. Ask them to arrive with an idea for a five-minute talk for a general audience on a topic of their choice.

**Resource and Discussion 1:** (20 min. video, 20 min. discussion) As a group, watch the following clips from *Communicating Science to Nonscientists*, by Jean-Luc Doumont. Each student should identify: (1) an idea they plan to focus on in their talk, (2) an idea they disagreed with, (3) observations about Doumont's own organization and delivery. After the clips, the facilitator should ask students to share with the group (a "Whip-around" format works well) and keep a list of (1) in a visible place in the classroom.

1. [11:00-17:20](#) Introducing yourself and your work
2. [17:20-21:30](#) The problems of distance, attention getters, adapting to your audience
3. [37:40-48:30](#) Comparison points, vocabulary, and interpretation
4. [53:40-54:30](#) Being audience-oriented

**Resource and Discussion 2:** (5 min. reading, 25 min. discussion) Have each student choose one page of David Stern's [series](#) *How to Give a Talk*. After students have read their pages, each student should describe the lesson of the page for the group. (If there are more students than pages, or you want to focus on a smaller subset of pages, students may work in pairs or small groups.)

**Resource and Discussion 3:** (10 min. video, 10 min. discussion, 10 min exercise) As a group watch Randy Olson on [storytelling](#). Topics for discussion: (1) Compare and contrast Olson's

advice with Stern's, (2) Does Olson's advice on storytelling apply to technical scientific talks?  
(3) What risks are there with taking this approach?

Then, in pairs, pick an abstract from a recent journal article. Convert the abstract to Olson's "And-But-Therefore" format. Each pair then shares with the group, and comments on whether this structure was apparent from the abstract as written, and whether the format works for the chosen paper.

**Talk planning:** (As time permits, in 25 min. blocks) Using the principles from the resources above, and guidance from the attached handouts, students work independently to prepare their five-minute talks. Students should begin by identifying the "Why," "Who," "What," "Where," and "When" of their talk, and then structure their introduction according to the Doumont handouts. Every 25 minutes, have the students discuss their progress in pairs or small groups. To structure the peer feedback, each student should ask their partner/group one question about an aspect of their talk that they are unsure about.

---

## Day 2: Delivery

**Talk planning:** (As time permits) Students continue to revise their talks. If time allows, they may practice their introduction or entire talk for a partner or small group.

**Speaking 101:** (90 min.) Michael O'Toole, the coordinator of UChicagoGrad's GRADTalk program, led a mini-workshop on the physical aspects of delivering a talk. Topics included stance, gesture, volume, tempo, and pitch. He led students in a series of active exercises, including marking up a sentence for intonation, and then delivering it first in an exaggerated manner and then in a more natural one.

**Final delivery and feedback:** (10 min. per student) Each student presents their five-minute talk to their peers, the instructors, and representatives from GRADTalk. Each student is given one feedback notecard for each other student. While listening to presentations, each student writes at least one "don't change" and one "maybe rethink" aspect of the talk. After each speaker, allow time for oral feedback from peers and instructors. Encourage students to couch their feedback positively and sensitively. At the end of the workshop, each student receives all of the feedback cards for their talk.