Don't wait to prepare THE TALK

Science communications as a tool to mentor success in lab, giving presentations, and beyond

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Why this session?

- Presenting a research talk **causes anxiety** for most students – *and mentors, too!*

- This session will share **tools and ideas for mentors** to help students be on track with their research project, including:
  - motivation
  - clarification
  - progression
  - iteration
  - communications

Key idea

Implementing science communications throughout your mentoring can lead to a more productive and positive experience for your student and you.
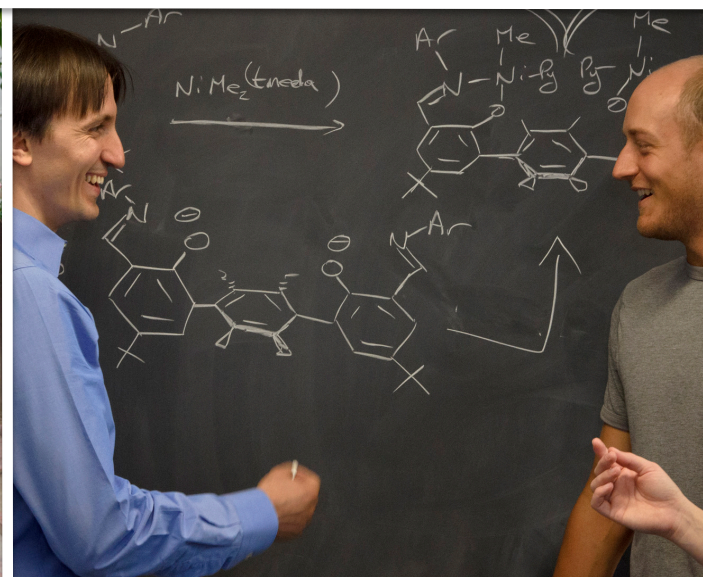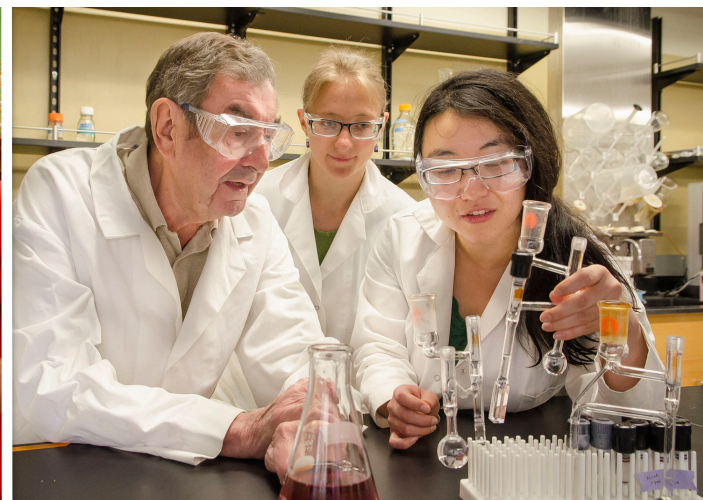
Mentors

Thank YOU!

Mentors

Group activity + share

Recall a mentor you've had.

What traits made them great in that role?
What could have been better?

Research Fellowship Workflow

- Meeting – student interest

- Proposal – jointly written and submitted

- Funding – time-limited fellowship approved

- Research

- Presentation ←→ Paper

Research Fellowship Workflow
+ SciComm!

- Meeting – student interest
  - assess knowledge base
  - ask how student learns best

- Proposal – jointly written and submitted
  - student contributes to basic concepts + motivation

- Funding – time-limited fellowship approved
  - first day: have the talk about THE TALK

Research Fellowship Workflow
+ SciComm!

- Research
  - Regular check-ins: email, text, discussion board, Skype, in person, formal write up (*mix it up*)
  - Schedule presentation rehearsal<u>s</u> on a calendar
  - Encourage student participation:
    - Group meeting mini-presentations of project/smaller concepts
    - Demonstrations of a lab technique or process

Ideas to open communications

- With every interaction, student must ask you a question.

- Support your student in both what they know, and what they don't know
  – Tell student, "It's okay not to know!"

- When you ask a student, "Do you understand?"
  "Yeah," is not an acceptable answer.

Ideas to open communications

- Ask students to:
  - *show* you
  - *explain* the concept back to you
  - *teach* someone else
  - *answer* questions

- **Give feedback.** Your words have a lot of impact.

Ideas to open communications

Group activity + share

- Shy student

- English as a Second Language (ESL) student

- Over-confident student

Research Fellowship Workflow + SciComm!

- Presentation
  - **First week:** create slides with motivation and ideas
  - **Throughout:** add insights, key findings
  - **Week before talk:** add plots/images, polish, and rehearse

  Make every effort to attend rehearsals and the talk.

Presenting a research talk

Group activity + share

Expert Amnesia…

- Think back to the first time you gave a research talk.

- What were you feeling? What went well? What didn't go well? How was your mentor helpful, or not?

Presenting a research talk

- Know and prepare for your specific audience.

Presenting a research talk

Doris S. Perpall Speaking Awards
Rating Criteria

We ask that you score each talk, using the criteria described below, on the enclosed rating sheets. Scores for each criterion are 1 through 10, with 10 being best. The speaker with the most points in each session will advance to the semi-final round.

Introduction and Organization

- The speaker has captured the interest and attention of the audience.
- There is a clear statement of the topic. The purpose and objectives of the work have been stated.
- The speaker has provided a road map for the talk (outline, agenda, summary of points).
- There is a logical flow from one point to the next. You can tell when speaker moves from point to point.
- The material has been organized to fit into the time allotted.
- The terms and concepts have been explained.

Technical Content

- The speaker demonstrates good insight into and understanding of the problem.
- Scientific explanations are sound.
- Analogies, examples, statistics, etc., are used appropriately to interpret the problem and illustrate the solution, results, and conclusions.
- The relationship between the project and other work in the field has been made clear.
- The speaker is able to answer questions.
- The speaker has summarized the outcome of the project.
- If no results were reached, the speaker has conveyed the nature of the difficulties and how these might be overcome or followed up.

Presentation Skill

- The speaker is confident in presentation of self and material.
- Language, dress, and manner are appropriate to the occasion.
- The speaker projects energy and vitality and exhibits a genuine enthusiasm for the work done and the opportunity to talk about it.
- If visual aids are used they are well made and effectively used.
  - Overheads, slides, or computer projections are clearly labeled and able to be read from the back of the room.
  - The amount of information on each is appropriate.
  - The speaker handles multiple overheads well; keeps them organized.
  - The speaker stays out of projection light, uses pointer.
  - The speaker explains/interprets visual aids for the audience.
- If audio-visual aids are not used, the speaker has found other ways (e.g., blackboard, flip charts, or verbal repetition to highlight main points) to keep the attention of the audience and help them follow the train of thought.

Presenting a research talk

- Know and prepare for your specific audience.

- In two minutes, share the motivation and key ideas.

- Your enthusiasm makes the audience receptive to you and your talk.

Presenting a research talk

- Review previous work sparingly, but do reference.
  (have detailed slides ready for Q&A)

- Don't throw in every step and technical detail.
  Share only the resulting key insights from all your effort.

- Finish on time. Your audience expects your talk to be done and will stop listening. Rehearsals help you refine this.

How to give feedback

- Find something positive.

- Give specific feedback.

- Provide next steps.

How to give feedback

Group activity + share

First talk rehearsal: Difficult to hear, too technical, explains every step, doesn't share motivation, no next steps

- Shy student

- ESL student

- Over-confident student

Diminish anxiety

- **Be yourself.** Research talks are personal and unique, just like you.

- **Deep breathing.** Can't breath, stand, or think? Breathe.

- **Nerves = enthusiasm.** Okay to gesture and move.*

Diminish anxiety

- Script the beginning and end of presentation. Helps with those first moments of anxiety.

- If you get off track, pause, check where you are, then continue.

- Keep moving forward.

- Before the presentation, do some physical warm up exercises.

Physical warm ups

- Power poses and stretches

- Vocal warm ups

- Practice walking into place, breathe, and starting with that script

Take aways

- Your role as a mentor includes science communications

- Tools and ideas to implement

- Plan ahead and schedule

- Support your student

Key idea

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Q&A

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