Overview and Aim

Effective communication is crucial for STEM (science, technology, engineering, and mathematics) education, and one that is often neglected in graduate and postdoctoral training. Communication impacts how STEM advancement is perceived in the public, how it is implemented in public policy, and how future generations view STEM careers. Improving STEM communication plays a critical role in how research in the lab translates to larger societal impacts. Our project is a STEM communication workshop, which focused on three main areas of communication: public policy, K-12 outreach, and impact of diversity on perceptions of STEM.

Through this full-day workshop at UC Davis, participants learned about STEM communication through various activities, including panels from a diverse and inclusive group of scientists and science communicators. The goal of the workshop was to educate trainees with both anecdotal and statistically proven methods of successful STEM communication, and provide trainees with STEM communication tools that can be used in a broad range of situations. After completing the workshop, participants are able to interact better with a variety of audiences, including: media outlets, K-12 learners, educators, and policy makers. There was also a focus on understanding how STEM is represented in the media, and the impact of public perceptions of science. Overall, we aimed to fill a gap in graduate and postdoctoral training by providing an opportunity for STEM communication training, and providing a space to reflect on the importance of communication beyond the STEM community.

Agenda

8:30: Sushi breakfast
9:00: Introductory Activities
10:15: Panel on Education Communication
Moderator: Katy Jarvis
Panelists: Nick Gray, Erin Loury, Mike Mullen, Briana Roche-Gregg
11:30: Panel on Political Communication
Moderator: Rylie Ellison
Panelists: Dr. Liz Anthony, Dr. Kadir Bedir, Dr. Naomi Ondrasek
12:45: Lunch
1:45: Panel on Media and Representation
Moderator: Amanda Deng
Panelists: Dr. Mike Copara, Adam Miren, Nicole Nguyen
3:00: Pop Talks III
3:15: Workshop with UC Davis Strategic Communication
Presenter: Dr. Andy Fell
4:45: Pop Talks IV
5:00: Communicating with Unexpected Audiences
6:30: Dinner

Workshop Impacts

Participants and panelists had opportunities to network and foster a science communication community in person and on social media with #UCDSTEMCom2018. (55 tweets, 4 instagram posts)

Hands-on trainings like the message box (with Dr. Andy Fell, UC Davis Strategic Communications), and Pop-talks kept participants engaged and prepared them for real-world STEM Communication opportunities

Statistical Analysis

Paired, two-tailed t test.

\[ p = 0.003 \]

Paired, two-tailed t test.

\[ p < 0.05 \]

\[ p < 0.01 \]

\[ p < 0.001 \]

\[ p < 0.0001 \]

Bonferroni adjusted p value is 0.01 for multiple comparisons.

Participant Comments: What did you learn from this workshop?

On Techniques for STEM Communication:
- "Frame your dissertation to suit your audience, no "one size fits all."
- "Start broad and basic. Slowly build up to the more difficult material"
- "It is important to remember that audiences may take home something of significance aside from the specific scientific question that you sought to communicate, and that's totally okay"

On STEM Communication Community and Jobs:
- "Identified a few alternative career paths centered around STEM communication"
- "I learned about groups at UC Davis and in the greater Sacramento area that are actively working in the science communication"
- "Jobs available in legislatures & politics for science experts"
- "I was reminded to treat grad school as training for whatever my career goals will be (even if that isn't academia)"

On Media and Journalism:
- "How to get publicity for your research through the university (Andy Fell)"
- "I learned methods for incorporating diversity in ways that are engaging for science."
- "How to work with journalists and what to do to ensure accuracy in reporting of my scientific results"

Responses collected by Brighity Anderton in the UC Davis Communications Department

Survey question: What are three things you learned in this workshop that will influence your science communication efforts in the future?

Participants and panelists had time to network and expand their connection in the STEM Communication field.

STEMCom Sponsors:

Special thanks to all our speakers, moderators, panelists, and activity leaders

The Clancy Lab