

Science Writing and Rhetorical Training: Creating a New Model for Graduate Science Writers

1. Exigence

National Science Foundation

Program: National Science Foundation Research Traineeship (NRT)



Track: Innovations in Graduate Education (IGE)

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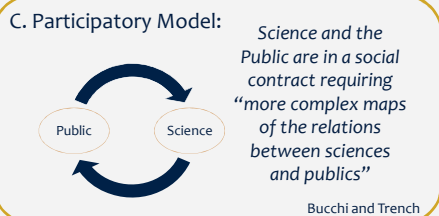
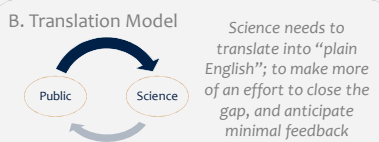
Funding: 3 years at \$500,000

The NSF and Council of Graduate Schools recommended future graduate education should include training for:

- diverse career opportunities
- development of strong science communication skills

R. Linton

2. Existing Models



3. Curriculum

- Graduate Students**
- Writing Intensive Coursework
 - Special Topics Workshops
 - Mentorships
 - Bootcamps
 - Graduate Student Writing Center
 - Internship

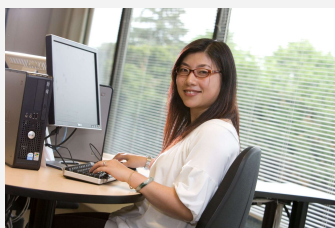
- Faculty**
- Mentoring Program
 - Pedagogy Workshops
 - Writing Support Infrastructure

SciWrite@URI bases curriculum and pedagogical support around three central practices:

Habitual Writing: Writing early and often to develop a regular practice or habit of writing (Hawhee).

Multiple Genres: Writing for actual academic and non-academic audiences (e.g. lay readers, journalists) to understand and enact how the communities of practice inform content and form (Devitt).

Frequent Reviews: Inviting and incorporating feedback to creating habitual practices of writing *and* revising throughout the process to specifically shape messages for colleagues, editors, lay readers, and others (Blakeslee).



We engage graduate students AND faculty in these three rhetorical practices throughout graduate training

- Graduate Students**
- Contribute to students' ability to participate in their scientific disciplines (Chinn and Hilgers)
 - Improve comprehension of scientific concepts (Keys; Rivard & Straw; Wallace, Hand, and Prain)
 - Incorporate habitual writing, multiple genres and frequent reviews from beginning of graduate training
 - Help students build confidence in communicating their science to the public

- Faculty Fellows**
- Attend two-year sequence resulting in pedagogical and curricular change
 - Work with the new Graduate Science Writing Center
 - Incorporate habitual writing, multiple genres, and frequent reviews into graduate education including work with advisees, syllabi, and faculty mentoring

- Faculty Mentors**
- Attend one multi-day pedagogy workshop (focused on habitual writing, multiple genres, and frequent reviews)
 - Actively train own graduate students in rhetorical approaches to science communication through one-on-one mentoring.

4. Assessment



Students

What has changed in terms of writing:

- Habits
- Confidence
- Skills
- Comfort
- Revision
- Process

Faculty

What has changed in terms of writing:

- Habits
- Confidence
- Curriculum
- Comfort
- Pedagogy
- Mentoring



5. Sources

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