

Increasing numbers of U.S. graduate students are engaging in collaborative research abroad, particularly in Science, Technology, Engineering, and Math (STEM) fields. At the same time, more international students are headed to the U.S. for graduate study. The rapid acceleration of these international exchanges will require complementary investments in preparing students for the responsible conduct of research – both in the U.S. and abroad. Specifically, students need to learn about research protocols, professional expectations, and regulations in other countries, and develop the ethical reasoning skills needed to respond to situations that may arise while conducting international research.

A basic challenge, however, is that training programs for the Responsible Conduct of Research (RCR) or research ethics typically do not cover issues raised in international contexts; conversely, joint international degree programs and international research collaborations typically do not include explicit attention to RCR or research ethics. The Council of Graduate Schools (CGS) embarked upon a three-year collaborative project to develop models for preparing STEM researchers to face ethical challenges in international research collaborations.

PROJECT GOALS

With funding from the National Science Foundation, CGS partnered with four universities to develop models for integrating international issues into research ethics education programs. Together, the partners created three types of resources:

1. Case studies of model programs
2. Learning outcomes that reflect core knowledge, skills and competencies, as well as assessment processes for evaluating these outcomes
3. An online repository of assessment tools

KEY FINDINGS

Findings were drawn from surveys of graduate deans and graduate students at the four participating institutions. Deans provided insight into shared strategies, including:

- Developing content for curriculum and programming
- Integration of curriculum and programming into existing structures or creation of new structures
- Outreach to constituents prior to programming combined with dissemination of results after programming has concluded
- Building internal and external partnerships

The results of the student surveys suggest that student awareness and participation increased over the two-year study period.

RECOMMENDATIONS

The results suggest that initiatives advanced by participating graduate schools positively affect student awareness and participation in research ethics education for international collaborations. The report recommends a number of best practices for universities, including:

- Ensure content is credible by incorporating input from faculty, students, and experts in research ethics
- Incorporate international issues into existing research ethics programs before creating new curriculum
- Use multiple formats to deliver content to a broad range of students who may have schedule limitations
- Make sure materials are easily accessible and heavily advertised
- Form strong partnerships with STEM faculties and student organizations, administrators who command political capital, and graduate programs

PARTICIPATING UNIVERSITIES

- Emory University
- Northern Arizona University
- University of Oklahoma
- Virginia Polytechnic Institute and State University

Access the full report at: www.cgsnet.org/publications