Transformation Alliance: Improved Academic Climate for STEM Dissertators and Postdocs to Increase Interest in Faculty Careers

Key Activities

Our project will produce a model set of initiatives for faculty advisors, postdocs, and graduate students that will strengthen underrepresented minority student and postdoc interest in faculty careers.

**BUILD**

- Mentors (faculty/postdoc) and mentees (graduate student):
  - Build stronger graduate communities and more inclusive research groups by exploring identity, lived experiences, implicit bias, and microaggressions.

**ASSESS**

- Mentors (faculty/postdoc):
  - Apply a data-driven approach to address systemic problems.

- Mentees (graduate student):
  - Create learning communities to provide support in the dissertation stage.

**SUPPORT**

- Mentors (faculty/postdoc):
  - Support creation and sharing of faculty-led initiatives through internal mini-grants.

- Mentees (graduate student):
  - Support transition to the dissertation phase through mentoring activities.

Research Strategy

Our qualitative educational research is centered upon three questions:

- How do students describe initial and continuing engagement with the department and the discipline?
- What experiences and relationships are most influential in strengthening students’ interest in faculty careers?
- How do peers and external supports influence the sense of community?

After each cycle, the research team will conduct focus groups at selected institutions with students, administrators, and faculty members.

Outcomes

**SHORT-TERM:**

- Graduate students and postdocs at participating institution experience an improved climate.
- Faculty use more student-centered advising practices for all, but especially URM students.
- Participating institutions will have better retention and degree completion of URM students.

**MID- TO LONG-TERM:**

- Faculty and department leaders show increased knowledge and practice of inclusive excellence.
- URM PhD students and postdocs show continuing interest in and improved preparation for faculty careers.
- Contribute to building a more diverse STEM faculty.

Project Goals

- Improve the climate in graduate education to increase the number of underrepresented minority (URM) graduate students and postdocs interested in and prepared for faculty careers.
- Implement a Networked Improvement Community that uses Plan-Do-Study-Act cycles of improvement to enhance our interventions.
- Disseminate our outcomes and tested practices across the 43 CIRTL universities that produce 30% of the nation's STEM PhDs.

Networked Improvement Community Cycles

Assess current institutional climate regarding inclusion at nine universities.

**PLAN**

Develop first set of practices based on hypothesized causes for drop in interest in faculty careers.

**DO**

Coordinate implementing faculty mentor and graduate student peer interventions, as described at right.

**STUDY**

Collect and analyze data using common assessments and metrics.

**ACT**

Revise hypothesized causes and refine plans for next cycle.

Get involved: We will help train you to promote inclusive excellence on your campus by adopting our measures and interventions, and using our evidence-based climate survey to understand your institution.

Contact Principal Investigator Craig Ogilvie, Iowa State University, at cogilvie@iastate.edu to learn more.

Institutional Partners

Iowa State University (Lead)
Boston University
Cornell University
Howard University
Michigan State University
Northwestern University
University of Buffalo
University of Georgia
University of Maryland College Park
University of Texas at Arlington

agep@cirtl.net

Center for the Integration of Research, Teaching and Learning

www.cirtl.net

This material is based on work supported by the National Science Foundation under Grant Nos. 1646810, 1646869, 1646977, 1647021, 1647094, 1647194, 1647199, 1647121, 1647146, 1647181.