Panel: Advancing Diversity and Inclusivity in STEM Education

SIGITE 2016
Boston, MA
What do you like about this photo?
Reimagining our Careers and Campus Culture

http://nsfadvance.rit.edu/
Now let’s look at another photo ...
May 12, 2015
Photo by Elizabeth Lemark/RIT Production Services

Assembly Majority Leader Joseph D. Morelle recognized RIT’s Cyber Defense team with a proclamation on behalf of New York State for placing third in the 2015 National Collegiate Cyber Defense Competition. Morelle and County Legislator Justin F. Wilcox co-hosted a panel May 7 at RIT to discuss career opportunities in the growing field of cybersecurity.
Academia Aligning with NSF ADVANCE Program

- NSF ADVANCE Program Goals:
  - Increase the representation and advancement of women in academic science and engineering careers
  - Development of a more diverse science and engineering workforce

- Encourages institutions of higher education and the broader STEM community to:
  - Address various aspects of STEM academic culture and institutional structure that may differentially affect women faculty and academic administrators
  - Integral part of the NSF’s multifaceted strategy to broaden participation in the STEM workforce
  - Supports the critical role of NSF in advancing the status of women in STEM academic careers

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NSF Responds to National Context

• Increasing number of women have obtained STEM doctoral degrees, yet women continue to be significantly underrepresented in many STEM academic positions.

• Advancement to senior ranks and leadership is an issue.

• Representation and advancement affected by many external factors that are unrelated to their ability, interest, and technical skills, such as:
  – Organizational constraints of academic institutions;
  – Differential effects of work and family demands;
  – Implicit and explicit bias; and
  – Underrepresentation of women in academic leadership and decision-making positions.

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Institutional Transformation

Process of bringing fundamental change to the core concepts and values on which an institution is founded
## Panelists

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<tr>
<td>Mary Deane Sorcinelli</td>
<td>University of Massachusetts Amherst Institute for</td>
<td>Amherst, MA 01003</td>
<td><a href="mailto:msorcinelli@acad.umass.edu">msorcinelli@acad.umass.edu</a></td>
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<tr>
<td>Sara Wadia-Fascetti</td>
<td>Northeastern University College of Engineering</td>
<td>Boston, MA 02115</td>
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Reimagining our Careers and Campus Culture

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Discussion Questions

• What is your department/college/campus dialogue like regarding gender equity?
• What are some of the concerns that a university would have about engaging in dialogue around gender equity?
• What are some of the apprehensions that faculty would have?
• Report Back
Sara Wadia-Fascetti, Northeastern University
Our Journey to Institutionalization

Northeastern ADVANCE
Office of Faculty Development

Our Journey:
• Builds on a Foundation
• Design Strategy to Influence
• Describe Institutionalized Programs
Our Foundation

ADVANCE Goals:
• Increase women in STEM
• Ensure women advance
• Increase ALL women
• Put women in leadership

BARRIERS:
• Unintended bias
• Policies & practices
• Culture
• Tension across goals

Northeastern Aspiration:
• New leadership
• Plan to add faculty lines
• Grow interdisciplinary focus
• Be global in every respect
• Focus on “network science”
• Expand graduate programs
• Improve reputation

Collective Challenge:
Reach ADVANCE Goals & enable Northeastern aspiration
Design Strategy

ADVANCE goals

Northeastern aspiration

Grant $$’s

Institutional $$’s
Design Strategy

ADVANCE goals

Northeastern aspiration

Grant $$’s

Institutional $$’s
Design for Institutionalization

NU aspiration

ADVANCE needs
## ADVANCE Programing

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**Policy Changes:**

**Research:**
# ADVANCE Programing

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<td>ReDI Data Views Future Faculty Wkp.</td>
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**Policy Changes:** Hiring plans, tenure clock extension, modified duties, create new funding opportunities, accountability

**Research:** Activities informed by research, assessed by research
People Need to Value to Invest

- Pre ADVANCE years – engaged STEM Deans
- ADVANCE Leadership reflects ADVANCE values
  - University leadership
  - Chair role
  - Faculty perspectives
  - Social science research
  - Interdisciplinary

- 3 Women
- 2 Men
- 4 STEM Colleges
- 4 Countries
- 3 Leadership levels
Used External Advisory Board

• Provost and Deans from “graduated” ADVANCE institutions
• Year 1 focus: How did you institutionalize?
• Avoid programs that benefit the individual
• Invest in the programs that enable the system to benefit individuals
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<tr>
<th>Activity</th>
<th>Not Yet Implemented</th>
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<th>Proven Working Model</th>
<th>NU Fabric, funded by grant</th>
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Transcend Leadership

Senior Vice Provosts & Vice Provosts: 40% Women

Deans of ADVANCE Colleges: 60% Women

Deans of Non-ADVANCE Colleges: 0% Women

Academic Associate Deans in ADVANCE Colleges: 50% Women

Department Chairs in ADVANCE Colleges: 20% Women
Office for Faculty Development

• Institutionalized as ADVANCE Office
  – New Office for Faculty Development
  – Space, staff, programming resources
  – CASE MADE: Remove barriers for a few; benefits many

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STRIDE for Recruitment

• In STRIDE senior faculty share learning
• Graduated STRIDE faculty are ambassadors
• Faculty on search committees are NOW required to attend a STRIDE workshop
• CASE MADE: Using hiring best-practices leads to excellence
  – STRIDE helped deans meet their annual goals
ReDI Leadership Development

• Mid-career leadership development for women and men (75 faculty; >50% women)
• Goals:
  – Enable faculty to continue with bigger projects
  – Help faculty see the system from different perspectives
  – Leadership is We

• What we do:
  – Workshops: self-reflection, teaming, differences
  – Getting to know the University
  – Visible Challenge Project

• CASE MADE: University benefits from positional and nonpositional leadership
Institutionalization is Journey

• Have a plan, but be prepared to adapt
• Shift responsibilities; routinize
• Shift $$ over time
• Make decisions for two horizons
Mary Deane Sorcinelli, UMass Amherst: My Vantage Point

• Study academic careers and faculty professional development; focus on faculty development across career stages, disciplines, and goals

• Serve on ADVANCE External Advisory Boards, as an External Evaluator, consult with numerous ADVANCE campuses, especially on mentoring models that support women, underrepresented, and all faculty

• Designed, implemented and studied campus-wide network-based mentoring model for new, mid-career, and senior professors

• A word about “context”
Four Practices That Help All Faculty Succeed

1. Strengthening leadership structures
2. Building strategic mentoring networks
3. Creating transparency through data collection, analysis, dissemination
4. Advancing policy in areas that specifically affect women faculty
1. Strengthening Leadership Structures

• To develop within academic leaders—and potential leaders—a sense of being agents of change in creating a more supportive and inclusive environment within their units

• To develop and empower women leaders by strengthening their leadership skills, experiences and capacities as leaders
Leadership Development and Structures

• **ADVANCE Professors/Faculty Excellence Advocates**: Senior women faculty member assigned to each college to mentor women faculty and work with Deans to create a more inclusive department/college culture

• **ADVANCE Allies**: Partnering with male faculty colleagues, Provost, Associate Provosts, Deans, Diversity Office, Institutional Research, Human Resources
2. Building Strategic Mentoring Networks

**Goals:** To allow faculty to clarify professional development goals; identify diverse models of success; find information, allies; engage peers for advice, affirmation

**Approaches:** one-on-one mentoring; mentoring committee; year-long peer or mixed group mentoring communities for pre-tenure faculty, associate professors, non-tenure track, women faculty, faculty of color, etc.

**Topics:** include getting to know the institution; gaining research and teaching skills; understanding tenure, promotion, evaluation processes; building professional networks; creating work/life balance
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**Life Sciences Women:** Address isolation; exchange best practices in full range of work and life; sponsorship

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**STEM Interdisciplinary Network**

- **Large Group**
- **Small Group**
- **STEM Women**
- **External Mentor**
- **Internal Mentoring Partners**
- **Author: "Every Other Thursday"**
- **External Mentoring Partners**
3. Transparency: Data Collection, Analysis, Dissemination

**Goals:** Increase institutional transparency and accountability; raise awareness; provide sense of agency

**Approaches:**
- Data Dashboard
- Faculty Work Environment/Climate Survey/COACHE
- Track toward benchmark goals for inclusive recruiting, hiring, retaining, advancing and recognizing women
Reimagining our Careers and Campus Culture

Data Dashboard: One Transparency Approach

- Online, college-specific resource
- Faculty access via university login
- Provides current information (per college) regarding:
  - Salary range and median; by rank
  - Time to advancement; by rank
  - Demographics; by rank
4. Advancing Policy for Work/Life Balance

**Goal:** To offer practical support for life decisions and challenges that confront faculty at some point in their careers

**Approaches:**
- Grants to support life transitions (e.g., childbirth, adoption)
- Support for dual-career couples
- Family-friendly accommodations (e.g., family leave, childcare)
ADVANCE as an Ally

• Provides data to help shed light on faculty retention, satisfaction, workload issues

• Aids in the recruitment, retention, and promotion of women faculty

• Helps connect your faculty to other faculty

• Supports academic leaders in thinking through practices to improve department, college, and institutional work environments for all faculty
Sharon Mason, RIT Institutional Context

- Private Institution
- 18,000 Students (15,000 undergrad)
- 1,000 Pre-tenured & Tenured Faculty
- Home to the National Technical Institute for the Deaf (NTID)
- Over past decade move from teaching to a “balanced teaching/scholarship” institution
Sharon Mason, RIT Connect Grants RFP

*Connect* Grants drive discovery and learning within an environment that supports the development of project proposals and the process of peer review. These mini-grants encourage leadership and career development, mentoring, networking and research collaboration, while enhancing and advancing the university’s multifaceted initiatives and scholarship infrastructure.
Sharon Mason, RIT Connect Grants

Advance RIT Project Goal

- Empower Faculty & Department Heads
- Broaden Opportunities to Promote Career Advancement
- Support Creative Efforts to Guide Faculty Through Career Stages
- Enable Projects that Facilitate Institutional Transformation

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Sharon Mason, RIT Connect Grants

Challenges
- Establishing & Promoting Funding Process
- Balancing Grant Goals w/ Support for All Faculty

Structure Benefits
- Gives Power to the People!!

Change Drivers
- Provost Support for non STEM/SBS & Men Faculty
- Formal Process to Support Informal Change Initiatives

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Sharon Mason, RIT Connect Grants Awards

- Peer-to-peer mentoring
- Gendered citation disparities in philosophy of science
- Application of the Appreciative Inquiry Process
- Post-tenure mentoring and leadership initiatives
- Re-submission efforts for successful external funding
- Effective mentoring and leadership skills for deaf and hard-of-hearing women faculty
- Women faculty in science and engineering professional network development
Sharon Mason, RIT Connect Grants Awards

• Developing Case Studies to Further Scholarship Pertaining to Business & Design
• Communication and Outreach through Mentored Media Engagement and Networking Teams
• Development of Categorical Perception in Sign and Speech: Preliminary Investigations
• Mentorship for an Interdisciplinary Numerical and Experimental Investigation for Colloidal Transport within Evaporating Droplets under an Electric Field
Sharon Mason, RIT Connect Grants Awards

• Mathematical Sciences Peer-to-Peer Mentoring Group on Advising Student Researchers
• WISE Distinguished Seminar Series
• Development of a Women in Liberal Arts Group
• RIT Women’s Research Colloquium Series presented by CREW
• Supporting Young Investigator’s Career Advancement through Mentoring and Collaboration
• International Collaboration: Understanding Trauma in Culturally Diverse Northern Nigeria
Sharon Mason, RIT Connect Grants Awards

- Charting a Course Towards Full Professor
- Health Information Technology Adoption and Usage in the Greater Rochester Area
- Salivary Testing Training: Extending RIT Faculty Expertise and Mentoring in Behavioral Science
- Supporting Career Advancement Through External Leadership Development
- Mentorship for an Interdisciplinary Numerical and Experimental Investigation for Colloidal Transport within Evaporating Droplets under an Electric Field
Sharon Mason, RIT Allies & Advocates

• National Science Foundation ADVANCE PLAN D
• An innovative approach designed to involve faculty men intentionally in the transformation of departmental cultures and practices
• North Dakota State University is leading the implementation of this program
  – RIT
  – The Ohio State University
  – University of North Texas
  – University of Wyoming
Goals

Educate faculty men about issues related to gender equity in academia

Introduce faculty men to strategies for bringing about positive change in their departments and colleges

Build a supportive network of faculty men who are Advocates and Allies for all faculty
Advocate Role

- Have a strong commitment to supporting women faculty in their department, colleges, and the university
- Be aware of institutional dynamics and structural bias
- Be active & effective proponents of gender diversity & equity
- Be interested in learning about issues of discrimination & privilege in the workplace

Activities:
- Meet regularly
- Work toward specific goals & outcomes
- Discuss readings & case studies
- Develop & deliver Ally Training Programs

Ally Role

- Speaking up at a meeting
- Inviting female colleagues to collaborate on research
- Nominate female colleagues for awards
- Serving on a committee as the gender equity proponent in place of their female colleagues to reduce the inequity in service loads

Take action primarily within individual departments
Margaret Bailey, AdvanceRIT PI, RIT

*from Mary Deane*: Four Practices That Help All Faculty Succeed

1. Strengthening leadership structures
2. Building strategic mentoring networks
3. Creating transparency through data collection, analysis, dissemination - **RIT Gender Equity Salary Study**
4. Advancing policy in areas that specifically affect women faculty

Support positive organizational growth and development - Cultural Change through **Unconscious Bias Education**, Allies & Advocates, **Bystander Awareness**
NSF AdvanceRIT

NSF Award #1209115  nsfadvance.rit.edu

• GOAL: Increase representation and advancement of women faculty.

• AdvanceRIT Project Includes:
  o Connectivity Series
  o Connect Grants & Partnership Grants
  o Unconscious Bias Education Workshops
  o Allies and Advocates Program
  o Dual Career Assistance Program development underway
  o Social science research – women of color and deaf and hard of hearing women faculty, lived experiences
  o AdvanceRIT Resource Allocation Committee (RAC)
AdvanceRIT Resource Allocation Committee

NSF ADVANCE requires universities to answer:

“What is the allocation of resources for T-TT science and engineering faculty by gender?”

• Study of faculty salaries by gender and AALANA status (with additional controls such as department, rank, years in rank)

  FINDINGS: Gender not significant (< 2%)
Faculty Salary Equity Study - Methodology

Examine salaries for potential systemic differences by gender, AALANA-status and accounting for variation from other factors:

*Discipline, Rank, Time in Rank, Terminal Degree, Overall Performance Rating (not separate performance ratings in teaching, research, or service), Benchmark Salary (based on discipline/rank)* Does NOT account directly for scholarship quantity or quality, teaching evaluations, workload portfolio, experience prior to RIT, etc.

**Data:** 2014 salary *after* annual merit review/market adjustments for 699 T-TT faculty

**Model:** Regression, observe effects of independent variables in explaining salary

**External Consultant:** Center for Higher Education at Ohio University hired through Request for Proposal (RFP) process
Findings

Significant predictors of salary:

– Primary Discipline
– Rank
– Years in Rank
– 2014 Performance Rating
– Terminal Degree
– AALANA Status
Build Transparency, Clarity, and Sustainability

• RAC – Communication to Deans and faculty this past spring semester, campus-wide communication from Provost regarding study

• HR – Follow up & annual equity studies: If individual salaries are significantly lower than expected, follow up based on results of analysis. Annual equity studies (same/similar methodology) for T-TT faculty, Non-TT faculty, and staff

• Academic Senate – Presentation this semester, ongoing revisions to policies

• Proposing the establishment of a Presidential level committee to continue the work of the AdvanceRIT RAC, endorsement being sought from Academic Senate

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Cultural Change

Numerous Offerings over grant period:

**AY2015**: MI Players (The Fence), Photograph 51 Theatrical Reading, Bystander Awareness (Maureen Scully, U MASS at Boston), Unconscious Bias Session for Academic Senate (norms/values) and Promotion Committees (gendered language)

**AY2012-2014**: Wiseli Workshop, MI Players (Navigating Dept Politics), Faculty & Staff Townhall, Department Head Session, Social Justice Conflict Resolution Week-long Workshop
Workshop Objectives (example)

- Build awareness of and appreciation for RIT objectives to attract, retain and graduate a more diverse population of students, and become a model for inclusion for faculty and staff.

- Recognize motivators for the institutional objective as well as the relevance/importance of the objective to participants—professionally and as members of their departments.

- Recognize the benefits of inclusion; and that we all have unconscious bias and can become conscious of our perceptions and behaviors, to become ambassadors for inclusion.
Workshop Objectives (continued)

● Understand that *bias* is essential to all selection processes—when biases used are intentional. **Unconscious biases (UB) can result in unintended outcomes.**

● Identify biases that are necessary and good for the university, build on processes (norms) that support desired outcomes, and **adapt norms necessary to prevent unintended outcomes.**

● Understand the **influence that we have to affect biases and outcomes.** We need awareness, skills and mindfulness to change the way we do things, but we already have the basic skills and strengths.
Cultural Change

- EAB October 2015 Feedback: *Impressive level of commitment to unconscious bias/microaggressions training- evidence of movement towards culture change at RIT.*
- In AY2015, Provost convened an Unconscious Bias (UB) taskforce to help shape a large scale education effort for faculty, staff, and students. AdvanceRIT provided background/research to inform dialogue. Proposed faculty approach utilizes the current College Liaison model (level of similarity with STRIDE model) and some targeted enhancements.
Discussion Questions

• What is your campus dialogue like regarding any of the specific initiatives discussed today? (Is there dialogue?)
• What type of faculty data is available (particularly if your institution is private)?
• What aspects of what you heard today might be possible at your campus?
• Report Back
Audience Questions
## Contact Us

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EXTRA: Sharon Mason, RIT Connect Grants

• Emulates NSF Grant Submission, Review and Award process
• Formal RFP with Rationale grounded in data
• Faculty & Admin Selection Committee
  – Cross university, mixed gender & rank
• Evaluation
  – Qualitative study with the University of Washington to examine cultural change within the university and professional/career development