Commission on Professionals in Science and Technology

Mentoring Program Models

Lisa M. Frehill, Ph.D.
Executive Director
Different kinds of institutions have received awards & taken approaches consistent with institutional culture & structure (¹Round 1; ²Round 2; Round 3)

- U California, Irvine¹
- U Colorado¹
- U Michigan¹
- U Washington¹
- U Wisconsin¹
- U Arizona
- Georgia Tech¹
- Virginia Tech²
- Rensselaer
- New Jersey Institute of Tech
- California Polytech, Pomona
- Brown
- Case Western Reserve²
- Columbia²
- Cornell
- Duke
- Rice
- U Alabama, Birmingham²
- Iowa State
- Kansas State²
- Marshall U
- New Mexico State¹
- North Carolina State
- U Rhode Island²
- Utah State²
- CUNY/Hunter College¹
- U Illinois, Chicago
- U Maryland, Baltimore County²
- U Maryland, Eastern Shore
- U Montana²
- U Puerto Rico, Humacao¹
- U Texas at El Paso²

http://www.cpst.org

ADVANCE PI Meeting • May 2006 • Arlington, VA • http://www.nmsu.edu/~advprog

... Your workforce data source.
Mentoring vs. Advisement

- **Instrumental features**
  - Career advice
  - Assistance with navigating the institution
  - Someone to ask as hoc questions
  - Connection to a research colleague

- **Psychosocial features**
  - A sense of “we” – shared community
  - Someone cares
  - “Giving back”
  - Family/friend – type of feeling
Why Mentoring?

- **Junior faculty**
  - Learn the ropes
  - Gain access to senior faculty and resources
  - Become embedded in a community

- **Senior faculty**
  - “Give back”
  - Satisfaction from helping a young scholar
  - Re-invigorate research
  - Gain access to more cutting edge ideas, procedures, etc. – connection to the new generation of scholars.
New Faculty

- Often **DO** understand the research process.
  - Should be asked to work with senior faculty on grants as Co-pi’s.
  - Senior faculty should consider asking junior faculty to collaborate on research as appropriate.

- Often **DO NOT** understand the service component of our jobs.

- May need some help adjusting to the institution for teaching, even if an experienced teacher.
Mentoring is a Key Transformative Strategy—Structure & Culture

- **Structure:**
  - Encourages development of ties.
  - Increase density of social networks.

- **Culture:**
  - Positive past experiences with mentoring.
  - It doesn’t “look” like a gender-based approach.
  - Reciprocity, collaboration, and flatness possible mentoring styles.
  - Relationships – nurturing vs. competitive.
Advisement

- UCI: Schools of Biological Sciences, Medicine and Computer Science: Advisory Boards Model.
New Faculty Orientations and Handbooks

- Increasingly popular
- Increased pressure to generate research $ 
- Accountability issues → increased bureaucracy
- Non-transparent resource allocations processes
  - negotiation
  - “old boys networks”
- Community building capability – depends upon program structure
- Almost entirely “instrumental”
Advisory Boards

- Internal to a unit (e.g., a college or school).
- Senior faculty – recruited to serve on panels.
- Junior faculty – recruited (usually request a board).
- 1 x / year.
- 30 – 60 minutes.
- Oral review of the vita.
- Almost completely instrumental.

http://www.cpst.org
Formal Mentoring Models

- Partner Models (e.g., Women’s Programs at UWashington and UWisconsin)
- Multiple Mentoring Model (NMSU)
- Group Mentoring (UTEP)
- Remote mentoring
  - MentorNet: E-mentoring.
  - UMBC
  - Association for Women in Mathematics
Common Features

- Matching process
  - Staff person w/excellent communications skills
  - Active recruitment of mentors
  - Involvement of “key informants”

- Training for both mentors and mentees
  - Mentors → Proactive

- Mechanisms – encourage interaction/follow-up

- Mentoring agreements

- Evaluation and assessment

- Instrumental AND psychosocial features
Partner Models

- One mentor is paired with one mentee.
- Women’s Programs and Women’s Centers pioneered.
- Low budget
  - Not enough staff
  - Lack of follow-up and assessment
  - Sometimes no training for participants
- Without group activities & assessment, effectiveness questionable.
Remote Mentoring
MentorNet

- Institutions join ([www.mentornet.net](http://www.mentornet.net))
- Individuals in the institutions request a mentor or volunteer to be a mentor.
  - Women
  - Under represented minorities.
- Pairings.
- All mentoring is done via e-mail.
- Training: scenarios, optional.
- Bi-weekly discussion topics to encourage mentors and proteges to communicate regularly.
- Strong assessment and research.
- WEPAN 2007 conference paper ([www.wepan.org](http://www.wepan.org)).
Group Mentoring
(University of Texas at El Paso)

- Pre-ADVANCE: Women’s Studies Program.
- Annual assessment.
- Two senior faculty grouped with 3-4 junior faculty.
- Provides context for peer-mentoring
  - Mentors.
  - Proteges.
- Only women.
Multiple Mentoring Model
(New Mexico State University)

Pairings
- All new faculty in STEM – males and females
- Cross-department
- Intense communications and info gathering
- PI/PD, Associate PD, and small group of faculty form pairs via discussion.
- Within college when possible, but not essential.
- Attempt to prioritize potential research compatibility.
Multiple Mentoring Model

- **Events** – 1-2 per semester to permit peer-mentoring.

- **Training**
  - Mentors
  - Mentees

- **Departmental mentoring programs encouraged/supported**
  - Provide a within-department mentor for all junior faculty.

- **Denser social networks lead to more connections all-around.**
(1) Connect mentees to mentors who are more central and have denser social networks.

http://www.cpst.org
(2) On-campus on-going events
Create a larger community of mentors and mentees.
Multiple Mentoring

- **Make mentoring normative**
  - Practice: paired ALL new STEM faculty with mentors outside their department.
  - Invite senior faculty and administrators to participate
  - Incorporated mentoring into leadership development programming

- **Encourage interactions**
  - Practice: pairs complete agreements
  - Practice: facilitated group interactions
    - luncheons, assigned seating, table topics—not always with speaker
    - mixers, dinners, picnics, open houses

- **Training: mentors**
  - Share best practices and hints
  - Increases connections among people with a positive orientation to mentoring
  - Encourage non-hierarchical practices
  - Gender and ethnic equity issues
Findings from NMSU Climate Survey:
Evidence of Mentoring Impact Participants versus Non-Participants

Percent satisfied with "How satisfied are you personally with the following: Opportunities to interact with others in your field or area"

Non-Participant
- Male: 126
- Female: 66

Participant
- Male: 23
- Female: 42

Overall
- Gender differences for faculty overall
- Gender differences for non-participants
- No gender differences for participants

http://www.cpst.org

... Your workforce data source.
Mid-Career Retention

- Ensure equity in job assignments and rewards for job performance.
- Create a collegial work environment.
- Provide opportunities to obtain seed money for new professional directions.
- Accommodate family and health needs.
- Encourage leadership.
  - Endorse women and minorities as leaders.
- Ensure competitive salaries.
Some helpful hints

- Types of mentoring
  - Career advisement
  - Psychosocial aspects
  - Advocacy
  - Mentor make contacts initially

- Matching—not an exact process

- Communications:
  - Articulate expectations
  - Clear about what you are getting out of the relationship
Teaching

- Identify a “master teacher” in your department to partner with new faculty members.
- Encourage new faculty to meet with faculty from other departments to “vent” and share ideas.
- Protect new faculty from excess work as thesis and dissertation advisors.
- Encourage new faculty to take advantage of institutional resources, like the Teaching Academy at NMSU.
  - Not “remedial” – improving skills is normative.
  - Give credit to those who attend programming to improve teaching skills.

http://www.cpst.org
• Importance and role of “service” within the university, college and department.

• Assist junior faculty in making wise decisions regarding service—know when to ask senior faculty to step up to the plate.

• Minority and women faculty are asked to do more “service” than non-minority and male faculty.
Why do minority and women faculty get asked to do more service?

- Committees have to have “diverse composition”
- Junior faculty are asked because they are likely to say “yes”
- Junior faculty are asked so that they can be integrated into the university community.
- Community: minority faculty are likely to be expected to serve as role models in the community AND minority faculty (especially African Americans) are likely to WANT to “give back” to the community.