Trainee-Mentor Relationships

KIN 895 - Dummer

Outline
- Trainee-mentor collegiality
- Mentoring relationships
- Mentoring and research misconduct
- Issues
  - Finding mentors
  - Networking
  - The “glass ceiling” in research

Trainee-Mentor Collegiality
- Working as a member of a research team
- Sharing equipment and facilities
- Sharing research data

Mentoring Relationships

<table>
<thead>
<tr>
<th>Needs and Interests</th>
<th>Responsibilities</th>
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</thead>
<tbody>
<tr>
<td>Trainees</td>
<td>?</td>
</tr>
<tr>
<td>Mentors</td>
<td>?</td>
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</tbody>
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Trainee Needs
- Navigate degree programs
- Prepare for careers
- Network with fellow students, faculty members, and (in the future) with colleagues
- Other needs?

Trainee Responsibilities
- Communicate with mentor(s)
- Fulfill degree requirements
- Participate as members of learning communities and research teams
- Develop knowledge, skill, and independence in research and other scholarly endeavors
- Other responsibilities?
Mentor Needs

- Reputation (self, students, and program)
- Scholarly productivity and grant funding
- RPT
- Other interests?

Mentor Responsibilities

- Care and concern
- Direct teaching and advising
- Informal mentoring
- Maintain an active research/scholarship program
- Recruit and help find support for qualified graduate students
- Other responsibilities?

Mentoring and Research Misconduct

- Research study by David Wright, Jered Cornelison, & Sandra Titus of MSU
- Analysis of 44 ORI closed cases where respondent was a graduate student, research fellow or post-doc.

http://www.isu.edu/research/docs/WrightMentoring.pdf

Research Question

- Background: Graduate students, research fellows, and post-docs were 3.7 times more likely than faculty members to be respondents in ORI misconduct cases during the time period from 1993-2002.

Did inadequate mentoring contribute to or fail to prevent misconduct?

ORI Cases (n=44)

<table>
<thead>
<tr>
<th>f</th>
<th>Type of Misconduct</th>
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<tbody>
<tr>
<td>43.2%</td>
<td>Falsification (n=19)</td>
</tr>
<tr>
<td>29.5%</td>
<td>Fabrication/falsification (n=13)</td>
</tr>
<tr>
<td>20.5%</td>
<td>Fabrication (n=9)</td>
</tr>
<tr>
<td>4.5%</td>
<td>Falsification/plagiarism (n=2)</td>
</tr>
<tr>
<td>2.3%</td>
<td>Fabrication/plagiarism (n=1)</td>
</tr>
</tbody>
</table>

Discovery of Misconduct

<table>
<thead>
<tr>
<th>f</th>
<th>Method of Discovery</th>
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<tbody>
<tr>
<td>35.7%</td>
<td>Fail to reproduce results</td>
</tr>
<tr>
<td>35.7%</td>
<td>Witnessed or became suspicious</td>
</tr>
<tr>
<td>9.5%</td>
<td>Data missing</td>
</tr>
<tr>
<td>7.1%</td>
<td>Fail to reproduce results &amp; data missing</td>
</tr>
<tr>
<td>7.1%</td>
<td>Can’t tell</td>
</tr>
<tr>
<td>4.8%</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Findings

• Mentor failed to review trainee raw data at regular intervals
  – 52.3% yes … 31.8% no … 15.9% can’t tell
• Mentor relied on others (or on trainee) to oversee research
  – 32.5% yes … 45.0% no … 22.5% can’t tell
• Pressure on trainee contributed to problem
  – 38.1% internal pressure
  – 7.1% grant, dissertation, or publication deadline
  – 4.8% new job waiting
• Cultural differences – 53.9% foreign trained

Discussion

• What constitutes inadequate mentoring?
  – Failure to review trainee raw data at regular intervals
  – Failure to establish clear standards
  – Failure to adequately support trainee career development

Additional Discussion

• Who is responsible for mentoring?
• What should mentors do?
• Mentoring is more challenging today
  – Large, interdisciplinary research groups
  – Technology-driven challenges

Issues

• Finding mentors
• Networking
• The “glass ceiling” in research

Finding Mentors

• Factors
  – Reputation
  – Expertise
  – Collegiality
  – Availability
  – Other?

• Locating mentors
  – Publications
  – Presentations
  – Research databases
  – Word of mouth
  – Other

Use the Community of Science Expertise Database:
http://expertise.cos.com/

Networking

• Why network?
• How to network
• How not to network
The “Glass Ceiling” in Research and Academe

Women may be disadvantaged by:

- Lower salaries, smaller labs, etc.
- More extensive teaching and service/outreach assignments
- Interruptions to work time because of pregnancies and child care & lack of protective policies
- “Good old boy” networks