

Individual Development Plan Workshops for Students, Postdocs, & Advisors in STEM fields

July 24

Northeastern University, Boston

10 – 11:30 Faculty/advisors

1-5 students, postdocs

<https://chemidp.eventbrite.com>

Mentoring and Group Building

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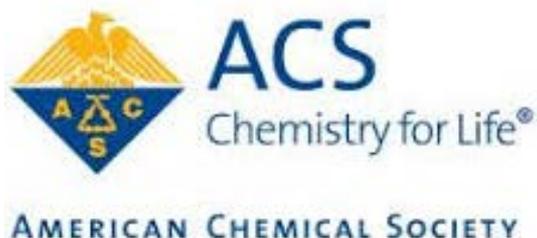
Michelle Francl, Ph.D.
Bryn Mawr College

and other facilitators



***Where 'Best' is defined over the set $\{A_n\}$ where $n=1$ number of Professors who would take me as their student.**

PhD comics



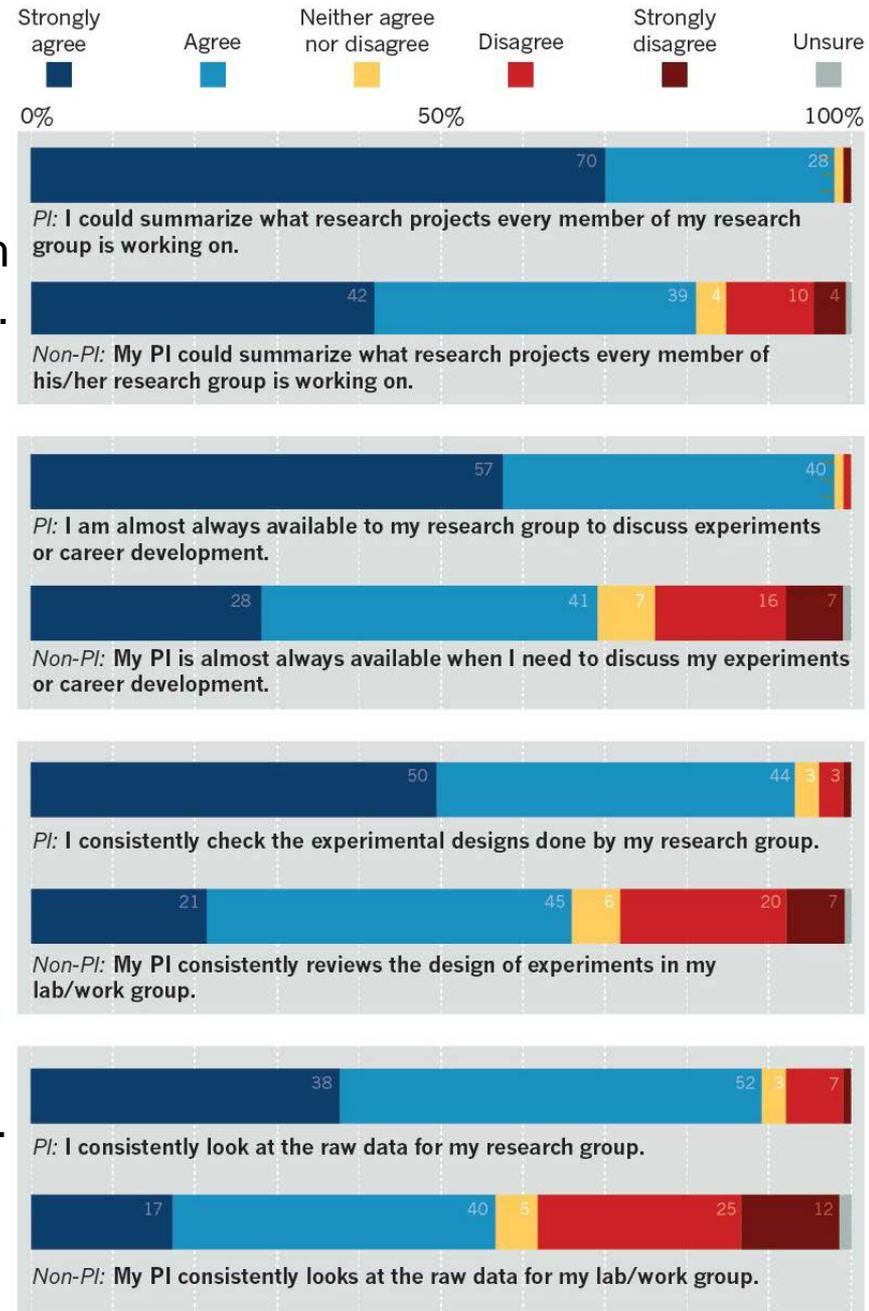
Perception Gap

The PI can summarize the research projects of every member of the group.

The PI is almost always available when a group member needs to discuss experiments or career development.

The PI consistently reviews/checks experimental designs.

The PI consistently reviews raw data.



Objectives for this Module



- Reflect on past mentoring relationships and how those shape the way you mentor current students
- Learn to make mentoring an intentional process rather than one that just happens by chance or circumstance
 - Develop skills in setting clear expectations for mentees
 - Develop skills in providing regular feedback to mentees
 - Consider using bidirectional Mentor/Mentee compacts

Memorable Mentoring Moments

Think about an experience that you had during your own training involving a memorable experience with one of your mentors (positive or negative so long as it was memorable). This could be an advisor or a peer mentor (such as a post-doc while you were a grad student).

- What happened that made it memorable?
- How did it shape the way you mentor students now?

Share the experience with your neighbor.



Mentoring Documents and Practices

- Mentoring Compacts
 - Examples...
 - <http://chem.wayne.edu/feiggroup/CSCNFW/resources-for-nfw-participa/mentoring-students.html>
- Communication plans/weekly meetings
- Setting clear roles and responsibilities for lab members
 - Lab orientation documents
 - Regular feedback on performance
 - Role of in-lab mentor
 - Who do you turn to for help if the PI is unavailable
- How would you edit/adapt these for your own laboratory?

It seemed so clear when you explained it

You have recently explained a complicated technique to your mentee, an undergraduate student researcher working with you. While you were explaining, he nodded the entire time as if he understood every word you were saying. When you were finished with your explanation, you asked him if he had any questions. He said no. Just to make sure, you asked him if everything was clear. He said yes. Three days later you asked the mentee how his work using this technique was going and he told you he hadn't started, because he didn't understand the technique.

What can you do in the future to make sure your mentee understands what you are saying?

Come up with at least three specific approaches for assessing your mentee's understanding.

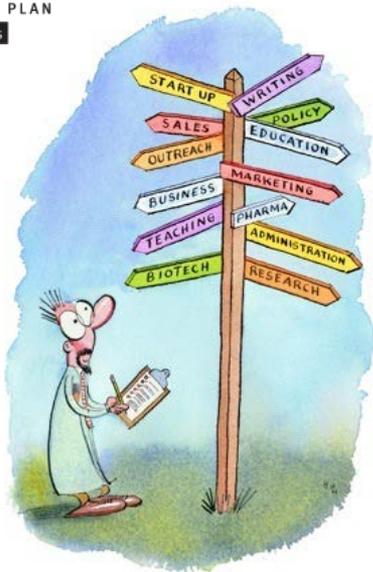
Source: NRMN, Wisconsin

Mentoring undergraduates in research

- Everyone needs to be trained to join a new lab.
- Intellectual ownership is key to continuing motivation. *UGs should not just be peons who don't get to see the PI.*
- Team roles must be clearly articulated from the top.
- Work to empower voices from your entire team. Always provide multiple channels for feedback, suggestions, and ideas.
- Mentoring documents work. Very clear expectations from the immediate start are very important.
 - Professional in the workplace

Individual Development Plans

myIDP



- help examining student's skills
- list of two dozen career paths, determining the best fit to the skillset
- a tool for setting strategic goals for a year ahead
- articles and other resources

ChemIDP



AMERICAN CHEMICAL SOCIETY

Helps Students:

- Assess Professional and Technical Skills
- Strengthen Professional and Technical Skills
- Develop and Prioritize Goals and Values
- Explore Career Options
- (Browse through a range of career areas, sectors or roles of interest)

5 Characteristics of a Good Mentor:

- ✦ Listen attentively
- ✦ Provide encouragement
- ✦ Be flexible
- ✦ Measure progress and give feedback
- ✦ Be committed

5 Characteristics of a Good Mentee:

- ✦ Set goals
- ✦ Clearly communicate your needs
- ✦ Receive feedback gracefully
- ✦ Listen attentively
- ✦ Measure progress and be willing to adapt

Prioritizing mentees

Good mentors are available to their mentees and group when needed

1. Plan your time to prioritize your group members and your mentoring. (e.g., before semester starts, block out all group/individual/research meetings)
1. Create effective communication channels for your group members.
 - Personal contact info (with boundaries)
 - Email priority
 - Slack or other app
2. Enable your group to make plans and organize events (with your review and assent), and then be there when they do.

Help mentees help themselves

Think Well, Hugh Kearns

<https://www.ithinkwell.com.au/resources/PhDToolkit>

Mental health crisis in academia

Degrees and depression

PhD and master's students worldwide report rates of depression and anxiety that are six times higher than those in the general public (T. M. Evans *et al.* *Nature Biotech.* **36**, 282–284; 2018). The report, based on the responses of 2,279 students in 26 nations, found that more than 40% of respondents had anxiety scores in the moderate to severe range, and that nearly 40% showed signs of moderate to severe depression. The high rates suggested by

Science **2018**



44% of undergrads and 41% of grad students reported that mental or emotional difficulties affected their academic performance in the past 4 weeks; Eisenberg et al 2007



GRADUATE SCHOOL

For grad students and postdocs, mental health begins with faculty

Want to solve the mental health crisis among grad students and postdocs? Start with faculty

by Jen Heemstra

JUNE 4, 2019 | APPEARED IN VOLUME 97, ISSUE 23

Take Away Messages...

- Think about how your actions as a mentor impact your mentees and be intentional in your mentoring practice.
- Establish clear lines of communication between yourself and your mentees.
- Be aware that we all have unconscious biases - that is normal. Goal is to not act in ways that are influenced by them if possible.
- Mentoring documents can help us articulate 2-way practices and expectations within the mentoring relationship.
- Include specific career guidance as part of your mentoring
- Be aware of academic, physical, and psychological indicators of distressed students. Know how to respond and make referrals.