

“Running a Great Lab”: Notes from Session #6, “Mentoring”

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6201 MSB

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What do you hope to learn? What is mentoring?

- Hands-on teaching in the lab
- Independence vs. dependence
- Dealing with students you don't like
- How to keep motivation going
- Pros & cons if different mentoring styles
 - Use different styles on different people; use different styles on the same people at different times/different times in the student career
 - Loyalty affected by style
 - Positive reinforcement preferred to negative
 - Kindness. Go to bat for your student. Builds loyalty & respect.
 - First gain trust, then you can engage intellectually
- Is boredom (a student's) a cover for something else? Like confidence? Help student build his/her confidence back. Let student know that everyone else goes through difficult transitions too. Spread infectious excitement.
- Transition from book learning to doing. First paper is a real transition point, a great way to generate excitement, but also a stumbling block for many students.

Advice: Try not to compare your own experiences to your students' experiences.

Question: How do you motivate a poor student? How do you motivate yourself to mentor a poor student? Do not let them hang on too long, cut them loose early. Maybe to another lab. Don't let a poor student linger on more than 3 years.

Advice: Set high expectations, people live up or down to the expectations you set for them. Tell your students often “I think you can do it.”

Advice: First year is not always indicative of a student's future. It is surprising but people can change.

The mentoring relationship is a complex one. If it is not working, then it just might be the mix of personalities with you and your student. THIS isn't the right match; there might be nothing wrong with either you or the student.

Question: What amount of distance in the student/mentor relationship is right? Answer: Don't be “friends” with people in your lab. Keep a little distance. It is hard for asst. profs. because they are close in age and spend a lot of time in the lab and have a lot of

interaction with the students. But, a PI needs authority and objectivity. Don't let your like/dislike of a person obstruct your evaluation of their work.. Be friendly and amiable. But not friends or buds. Keep it professional. Also helps the students become more independent.

It is harder to spend time with the bad students, it's more fun to spend time with the good students. But bad students might need more time. Give people the time they need. Remember that all personnel in the lab are watching how much time you spend with the others and are making note of it. Keep it equitable.

Should you do individual meetings with students? Mixed reaction—some always do this, some have decided to not do it anymore because students hate it. If you are in a large lab, might meet with subgroups (2-3) who work closely together, this takes the pressure off of the individual. Like a mini-lab meeting. Be sure to get input from everyone around the table to generate peer pressure.

When you make decisions (personnel or otherwise), be clear about why you are making a decision and be sure to communicate. Explain yourself. Always remember how scary you are to the students. They will make up lots of nefarious reasons for a decision if you don't fill in the blanks. However, keep in mind the confidentiality of your students. Students talk and word will spread like wildfire. You can try to explain truths and be as transparent as you can. E.g., how you make decisions, why do you what you are doing, give detailed, frequent feedback.

Give annual or bi-annual reviews. Ideally, do reviews with a committee. Start this early, in the 1st year. Committee reviews help the mentoring process, and committees also “give you cover” if things aren't going very well.

Question: How do you judge whether a student is working hard, putting in the effort? As an asst. prof. there is little basis for comparison. Answer: Set expectations for students early, put everything out in the open. As the student—“How hard are you working? Are you doing your best? Could you be doing more?” The student will often answer the question for you! Also, look at the objectives for the student. If they aren't meeting the objectives, then go back and ask “why not?—not enough time in the lab? Wasting time in the lab?”

Junior faculty typically have only a couple of students, so there is a lot of one-on-one interaction, and some of the strategies (e.g., dividing up into smaller groups for meetings) don't work. What to do?

- Team up with another lab. Have some combined lab meetings. This gives students more contacts, and then you don't have to do ALL of the teaching/mentoring for the students.
- When they come to you repeatedly for answers, ask them “how else could you have gotten the answer (besides coming to me)? I won't always be there.” Or tell them “I'm concerned that you aren't independent enough. How can we foster more independence?”

There are different types of mentors, and just as there is variety in the types of mentors, there is variation in what students want from mentors. There is no one best-way to do things.

The key thing is the importance of standards. Set them high and enforce them. Be uncompromising.

Take a look at the Entering Mentoring book. There are suggestions in there for how to get students to engage with you.

You could even try teaching an Entering Mentoring course—teach it to grad students!