Whenever I welcome a new batch of students to my lab, I tell them: “Two problems can prevent success. The first is poor communication, and the second is poor data management.”

At the moment, I still think that’s true. And since poor data management is a byproduct of
poor communication, it really just boils down to communication. Early on in my career, when students ran into difficulties in my lab, I was too quick to attribute communication failures to my lack of approachability, or to their poor decision-making. I don’t see it that way anymore.

Oftentimes in my lab, minor bad stuff happens that is eminently fixable. But sometimes, students don’t want to tell me about it, thinking they can fix the problem on their own. Then it gets worse, and worse, and I don’t learn about it until it’s too late. This has happened to me more often than I wish to contemplate. Let me use a real example to illustrate how this plays out.

After being in the rainforest for a couple weeks, one of my students asked me, "Have you seen John's leg yet?" ("John" is not his real name.) I thought, “WHAT? This doesn't sound good.” I asked, "What about John's leg?" And I was told: "He had a bite, but it got infected and he keeps scratching it, and it looks pretty ugly." So I tracked down John, looked at his leg, and thought, "Dear All That Is Holy, we need to get him to a doctor like yesterday." I will do you the favor of not providing a graphic description, but clearly, the infection had gone several days past the point when he should have sought medical attention. A trip to our small-town clinic would no longer suffice, now we needed a proper hospital to deal with this properly. In short order, he was whisked off to the big city to have his infection dealt with on an outpatient basis.

End of story. No huge deal. But it was a medical not-quite-yet crisis that shouldn't have happened at all. The problem emerged because John didn't tell me as it was developing. I only found out about it after it had escalated.

I could offer a few other examples along the same lines, with bigger personal or research-related crises — ants not behaving, field experiments taking too long to set up, child-care problems at home, an odiously sexist member of the crew — that were not resolved so tidily. But John's festering leg is a straightforward example.

So let me ask: Who is at fault here? Me, John, or both of us? And what did either of us do wrong?

I changed my mind about that three times after the incident:

- Initially, I thought it was John who was at fault because he didn't tell me about something that was important. It was his job to tell me about this kind of thing.
- Shortly afterward, I realized that I was at fault, because I was (apparently) the kind of mentor who John could not approach about a problem. He must have thought I was too
busy, or didn't care, or would blame him, or embarrass him, or something else. It was my personality as his supervisor and mentor that was the problem — I wasn't approachable enough.

- Then, after a bit more introspection, I recognized that both of us were at fault. I should have been more approachable, but then he should have approached me anyway.
- With some years’ hindsight, I've come to recognize that that's wrong, too. It was my fault. I was the supervisor, and it was my responsibility.

The buck stops with me. My shortcoming wasn't in being approachable enough, but in being an inadequate mentor. I was never trained in how to be a mentor and, for far too long, I relied on accessibility and approachability as a mentorship tool. And that has been my undoing on multiple occasions.

Of course we don't want our students to fear us. We want them to find us approachable. But it's not their job to bring up every important thing. It's our job to ask questions about the right things. Just as we cannot rely on our own approachability, we also cannot rely on our students' willingness to approach.

Moreover, we shouldn’t rely on their ability to differentiate between what is important to mention and what is not important. The adviser-student relationship is built on the experience of the mentor. As mentors, we are supposed to know which things matter, and we need to pay attention to them — even if they are not problems at the moment.

I just helped run a workshop on mentoring undergraduates, and there was a ton of experience in the room. But when my co-organizer asked, "Who here has received training in mentorship?" it was crickets. This isn't something academics are trained to do, and a lot of us who have been doing it for a long time aren’t all that good at it. I don’t know if I’m good at mentoring now, but I do see that the way I was doing it for a while had a lot of shortcomings.

Being a good mentor takes not only time, but conscious active effort. It's very easy to tell someone what to do, but it's a lot more work to guide someone toward figuring out what to do. You can demonstrate a field or a lab technique, or how to do something new in a spreadsheet. But when it comes to big-picture stuff — about how and why we are doing what we're doing — that's not an "I'll tell you" thing, it's a "Let me ask you questions to help you find your own way" thing.

Those conversations take time. If you don't like mentoring students, and you aren't interested in them as human beings, then it gets very tedious very quickly. I do really like my students,
but I often have taken on too many at the same time, and also I haven't recognized the importance of asking questions, listening to the answers, and then asking a series of new questions. Too many of us ask, "Is everything OK? Any questions or concerns?" and then stop when things sound fine. But good mentoring involves follow-up questions: "Are your data sheets looking like they should? Is everybody getting along well? Have you have any safety concerns? What are things that haven't worked out like you've anticipated? Are there supplies you need or want? Does it feel like you'll meet your objectives if you work at the current rate? What articles have you been reading?"

Unless you have regular conversations about low-stakes hiccups, it's not likely that a mentee will volunteer information about high-stakes hurdles.

So the onus is not on your students to mention a big problem, it is on you as the mentor to maintain a consistently open conversation so that problems can get mentioned as they emerge. You can't let students go relatively unsupervised, and then expect them to contact you when a problem pops up. Effective mentorship means being in touch even when the mentee doesn't see problems.

I should have known about John's infected leg far earlier. We had regular meetings, but those meetings weren't adequately structured to give him the opportunity to volunteer little things that were troubling him. I wasn't listening enough, I wasn't asking specific enough questions. He didn't tell me because I didn't provide the opportunity.

In short, to be a good mentor, you don't necessarily have to "be approachable." You have to be actually approaching students yourself — and on a regular basis. We're not just there to fix problems; we're there to help identify problems that the mentees don't even know about, and to help them find solutions. You can still be a great mentor if your mentees never, ever choose to voluntarily come to you for a conversation — so long as you are arranging regular appointments with them, asking lots of questions, and listening.

You can also be an excellent mentor and be an extraordinarily busy person. Some of the best mentors in academia are very busy people. That's not a fluke. Busy people get stuff done and are proactive about what they are doing. They can be busy and put their mentees first. I once talked with someone who claimed to have "mentored over 100 undergraduates" while in grad school. I asked what that mentorship involved, and it turned out to entail having students volunteer to run samples through a machine for a few hours a week. That's not mentorship — if anything, it's exploitation. You're a good mentor if you're consistently putting your mentees' professional interests above your own stuff.
It's good for your students to know they can approach you when they think they need you. But to be a good mentor, you need to consistently approach your students when they don't think they need you.

This post originally appeared on Small Pond Science.

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