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## NextGen advises "Trying to Manage"

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# INSIGHTS

## LETTERS

Dear NextGen Voices,

One of my lab responsibilities as a graduate student is to train another graduate student to do certain parts of the team's research. The graduate student often neglects his duties, which means I have to do the work myself. Despite meeting with him to demonstrate exactly how to do the tasks, offering to answer any questions he has, and reminding him that many of these tasks are time sensitive, I have not been able to persuade him to complete his assignments. I always cover for him, both because failure to do these tasks puts my own research at risk, and because my principal investigator (PI) has trusted me to train this student, so his failures reflect poorly on me. How can I more effectively train this student and also protect my research and my reputation as a manager?

Sincerely,

"Trying to Manage"

### NEXTGEN VOICES: ASK A PEER MENTOR

## NextGen advises "Trying to Manage"

Peer mentors can provide crucial support to young scientists by asking questions to facilitate further reflection, assuring mentees that they are not alone, and suggesting potential next steps. We asked our readers to act as peer mentors to "Trying to Manage," the anonymous student who posed the question above. Follow NextGen Voices on Twitter with hashtag #NextGenSci. Read previous NextGen Voices survey results at <https://science.sciencemag.org/collection/nextgen-voices>. —Jennifer Sills

### Share the big picture

Does your mentee understand the big picture? As a fourth-year graduate student, I have mentored eight students. Many challenges I have seen—including procrastination, experimental failure, and neglect of responsibilities—stem from a lack of understanding, a failure to see the big picture that results in mentees feeling inadequately prepared, undervalued, or even used. Mentees' self-esteem and confidence thrive when they understand how their piece contributes to a larger puzzle.

**Douglas Steinhaff**

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Is the student you are responsible for facing any specific problem in the lab that is hindering his tasks, or is this an issue of motivation? A few years ago, as a lab technician, I needed to delegate duties that seemed repetitive and boring to lab interns. However, when I explained that the tasks were essential for disease diagnosis, they began to perform the duties with greater enthusiasm. You can help motivate your student by helping him to identify the importance and meaning of his work.

**Joel Henrique Ellwanger**

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How can you make this student feel like part of a team? When I supervised interns as a young scientist, it made a huge difference when they felt their job was important, not just a chore. Students are used to working independently; it is important to show them the benefits of assuming responsibilities as part of a team. During a lab meeting, you should announce that your mentee is fully trained in a given task and will be fully responsible for it going forward.

**Monika Lewinska**

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How does your trainee hope to benefit from the training you are providing? During my first year in graduate school, I assisted in a senior student's research as part of my training. Because we never discussed authorship, I was not listed as a coauthor on the resulting publication. Later, my application for a postdoc was rejected because I did not have any publications to demonstrate my expertise in the techniques we used. As long as your trainee is unsure whether his contribution to your research work will be adequately recognized, he will not be motivated to complete any task you assign him. You should clearly explain that his level of contribution will determine whether he is listed as an author.

#### **Edmond Sanganyado**

Marine Biology Institute, Shantou University, Shantou, Guangdong, 515063, China. Twitter: @ESanganyado

## **Clarify expectations**

Does your lab have clear standard operating procedures (SOPs)? When I started my own lab, I found that even skilled students sometimes did not train others effectively because they were too busy with their own experiments to provide all the necessary details. I established Lab SOPs explaining all experimental protocols, and at the beginning of each new term, lab members (including new students) gather to update and improve the protocols together. Ask your PI if you can take the lead in creating SOPs for your research. This will show initiative and minimize the time required to train new lab members, for you and for those in your position in the future.

#### **Yongsheng Ji**

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Have you asked the student to demonstrate how the work is done or to make a list of things he plans to do each day? As a graduate student, I mentored graduate, undergraduate, and high-school students, and I faced similar situations in which the mentee did not realize the time urgency of the work. Email your adviser (and copy your mentee) to arrange regular project update meetings, and ask your mentee to present the findings of his part himself. Emphasize that you want the adviser to recognize his work. This will remind him of his responsibility to complete the work and the potential praise he could earn when successful. From that point on, do not cover for him. This will

persuade him to critically analyze his results before approaching your adviser. Moreover, great mentor that you are, you are training him to successfully present experimental findings.

#### **Buddini Iroshika Karawdeniya**

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Have you set clear expectations for your mentee and explained why it is important that he meet these expectations? It can be difficult as a junior researcher to be in charge of others, particularly if the mentees' working styles differ from your own, which has always been the case for me when I have mentored students. The first steps in mentoring and supervising are to get a baseline assessment of your mentees and to set clear expectations. Once the expectations are established, continue to provide feedback to let the mentees know whether they are meeting expectations or what else they need to do to succeed.

#### **Naïke Bochatay**

Department of Pediatrics, Division of Pediatric Critical Care, University of California, San Francisco, San Francisco, CA 94143, USA. Twitter: @nbochatay

Are you truly helping the graduate student become a better professional by continuously covering for his failures? I have experienced similar situations in which those in my charge were unwilling to fully accept and execute their responsibilities. In each of these situations, I knew that the student was fully capable; however, they were not giving their full attention and focus to the tasks at hand. Acting in the best professional interests of those in our charge sometimes requires us to put aside feelings of social awkwardness. Talk directly to this student: Set clear expectations, enforce rules, and, if possible, impose consequences on his errant behavior.

#### **Eric Britt Moore**

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## **Build a relationship**

Instead of showing the student how to do the experiment, have you tried doing the experiment together? Because English is not my first language, I used to be so afraid of being seen as dull-witted that I would not ask questions. I would pretend to understand what was asked of me and then spend hours online trying to figure out what to do. It made learning a laborious and frustrating process. The patience of my

mentors and their willingness to show vulnerability have helped me understand that making a mistake in an experiment is not the end of the world. If you act as a supervisor, the student may think that asking you for help will diminish his worth in your eyes. Instead, invite him for coffee, talk about the project (especially the exciting parts), and ask for his input. Make him part of the process. Once he is invested in the outcome, he will be more likely to participate.

#### **Aminata Coulibaly**

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Have you asked the student if he is okay? I remember a mentee who had difficulty finishing his work. When his mentor learned that he had an ill family member, he allowed the mentee flexible work hours. The mentee came to the lab whenever suited him best and soon caught up. Try to meet more often with your mentee. The main purpose of a mentoring relationship is mutual learning and growth, and the more you invest, the more you will gain from the experience.

#### **Shaima Ibrahim**

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Have you thought about other reasons the student may be neglecting his responsibilities? When working with people whom I oversee, I often find it useful to get to know them as individuals. This helps me to tailor the sort of advice and instruction I give them so that we can all meet the specified deadline. Perhaps your student feels overwhelmed by the workload or never learned proper time management as an undergraduate. Perhaps your method of offering help has to change to accommodate this individual's background.

#### **Déna Skye Jansen**

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What is your student's current stake in the research? Does he understand how the lab work contributes to his personal research goals? Often, new members come into a lab with their own research interests, which may not align precisely with tasks that need to be done in the lab. Talk to the student about his own research interest, and help him find a way to relate his interest to the lab work.

#### **Joshua I. James**

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Motivation may be the problem, but what are the alternative hypotheses? Before my doctoral training, I directed a clinical center. The company's CEO would have been rightfully worried if I had reported smooth sailing week in and week out. Managing people is messy. I instilled confidence by reporting substantive problems as they arose, sharing my progress with addressing ongoing problems, and acting confidently enough to ask for support. In your laboratory, you systematically identify and modify functional variables within your control. A scientific approach is no less useful when managing people. A fact-finding mission might consist of seeking to understand the student's situation over coffee, explaining yours, and persuading him that you are collaborators with a common objective. Communicate these efforts with your adviser. Impressive managers do not hide problems; they show that they have a plan for managing them.

#### David M. Cole

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## Ask for help

What can you learn about mentoring from this challenge? I experienced a similar situation with a student who didn't respond to feedback. The best advice I received was to use this situation as an opportunity to learn how to mentor rather than an interpersonal drama to solve, and to ask my mentor how he would handle the situation. Framing the situation this way made it less an issue of complaining about a fellow student and more of a skill-building discussion about learning how to manage others.

#### Anna Lipkin

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Can you ask your PI for advice on how to mentor this student more effectively? It seems like you're in a tough spot: You're this graduate student's supervisor and therefore accountable for his performance, but you're simultaneously his peer and therefore have no power to make him do any work. This is an unfair situation that you've been put in, particularly given that his failures present risks to your own research. It's worth remembering that even though you're the senior person in this relationship, you too are still a trainee. As a graduate student, one of the things you're

supposed to be learning from your adviser is how to mentor others. Try discussing this situation with your adviser from this perspective. Your thesis committee may also be able to step in and help you protect your research time.

#### Beth McKinnon Adamowicz

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Is there something about your PI that makes you hesitant to discuss this situation with him or her? Your dilemma appears to be that you were asked to train this person (which you seem to have done), but you now are trying to manage him, which you were never taught how to do. Most scientists (possibly including your PI) have never gotten any management training and are at a loss when faced with a team member who isn't doing their job. Is there something going on in this person's personal life that's preventing him from focusing? Has he lost interest in this project or the lab? It is the PI's job to ask these questions, not yours. But your PI can't do that unless you let him or her know what's going on. By keeping silent about the situation and doing the work yourself, you are facilitating the student's behavior. There is no shame in not knowing how to do something (managing others) that you were never taught.

#### Carl M. Cohen

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What's your first priority right now—becoming a better manager or becoming a better scientist? I've experienced a similar situation, but I was the unproductive labmate. Although I sincerely appreciate the work my peers put in to try to help me succeed when I was struggling, what I really needed was some tough love from my adviser and some encouragement to get counseling to help overcome emotional obstacles to my success. Let's emphasize the positives: Your PI trusts in your lab skills, your ability to explain techniques thoroughly and safely, and your overall reliability—that's huge! You've been working hard to repay that trust by making your mentoring relationship with your labmate a success, and you've been patient and empathetic, which is wonderful. But look: You'll have the rest of your career to hone your skills as a manager. Right now, you're sacrificing research progress to hide your mentee's failure to thrive, and that does

nobody any good. I encourage you to marshal your empathy one more time and talk to your labmate about why he's floundering—what looks like lack of interest may be something else. After that, you've done what you can as a boss; it's time to ask your PI for help with this delegated responsibility.

#### Shervin Fatehi

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Would it be helpful to discuss your situation with a senior colleague or with your PI? I have experienced similar situations, both as a grad student and as a postdoc. An important part of being a successful supervisor is recognizing when you need help. Document your experiences with your coworker, keeping things as factual as possible: dates, experiments, results (or lack thereof), and your actions.

Then request a meeting with your PI and explain the situation. Be clear that you are looking for a way forward with your student, keeping in mind that he may have a different view of events. Supervising other students is a good step in growing up as a researcher, but it presumes strong and constructive support from supervisors.

#### Maria Helena Holmstrom

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Why do you think this graduate student is not completing his duties? If there aren't personal issues hampering his work, then you should provide clear, documented instructions moving forward. By email (so you have a paper trail), give him a clearly bulleted list of assignments with generous deadlines. Note that you are happy to meet with him to provide a technique refresher or discuss time management, provided he gets in touch by a specified date; otherwise, you will assume that he will be able to complete his duties. If he still shirks his work, document the shortcomings and go to your PI. If you document the issue and what you've already tried to fix it, you will come across as a capable manager stuck with a problem trainee. Continuing to cover for this student is unsustainable, and it should not be your burden to bear alone!

#### Rosa Li

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# Science

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