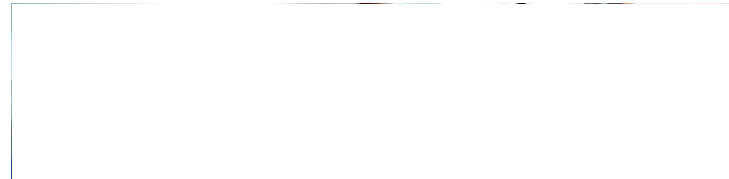


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What matters in a Ph.D. adviser? Here's what the research says

By **Katie Langin** | Apr. 5, 2019 , 10:55 AM

Earning a Ph.D. takes years and poses many challenges, so it's important to choose the person who will shepherd you through the process—your Ph.D. adviser—wisely. There's no single formula for choosing the right Ph.D. adviser; the factors will vary for each student. But the latest research on the topic points to things to look for when making a decision, as well as pitfalls to avoid.

...erically, in the times of trying and the real danger of the study. You have someone who is not discouraged. You'll have doubts about yourself—about your research ideas, about many things." So, it's important to have an adviser who "believes in you and is willing to give you that extra support that you need in those trying times," he says.

Dericks and his colleagues homed in on the importance of adviser supportiveness by surveying 409 Ph.D. students—85% of whom were in the sciences and engineering—at 63 universities in 20 countries. The United States, Australia, and countries in Europe yielded the most survey responses. The team measured student satisfaction by asking the survey participants to rate the degree to which words such as "good," "happy," "terrible," and "disappointing" described their overall Ph.D. experience. Then, the researchers asked students about their experiences with the people and support networks that immediately surrounded them in academia: namely their advisers, departments, and peers.

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Adviser supportiveness—whether an adviser was caring, considerate, encouraging, and sympathetic—was the most important factor for student satisfaction. According to the researchers' findings, switching from an adviser who was strongly unsupportive to one that was highly supportive would be expected to increase the Ph.D. satisfaction score—on a scale of one to six—by nearly two points. None of the other factors considered—including age, gender, years of study, country, and department and peer qualities—had such a strong effect.

Working style

It's also important to figure out whether your working style is compatible with your prospective adviser's style, says Anna Sverdlik, a psychology postdoc at the University of Quebec in Montreal, Canada, who studies conditions that promote the success and well-being of Ph.D. students, and co-authored a [review article](#) on the topic published in September 2018. What works for individuals varies: Many students don't want someone constantly looking over their shoulder, but for some it can be helpful to have an adviser who keeps tabs on them more regularly to set deadlines and ensure that they're making progress, she says.

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Either way, it's best not to have an overly hands-on adviser because that can handicap your future career, says Sotaro Shibayama, an economist and senior lecturer at Lund University in Sweden and the author of a new [study](#) of how advising style influences Ph.D. students' long-term success, published in this month's issue of *Research Policy*. Shibayama tracked 791 life scientists who earned a Ph.D. in Japan between 2000 and 2010, counting the papers they published in graduate school and up to 9 years after graduation. He found that when advisers were largely responsible for dictating the design of their students' research projects, students initially benefited because they published more papers during graduate school than peers who were given more autonomy. But after graduation, researchers who were advised by professors who weren't so hands-on went on to be more productive.

The study underscores a fundamental disconnect between the interests of advisers and advisees, Shibayama says. Advisers may want to publish as many papers as possible so that they can win more grants and move their research programs forward. But advisees are best served if they are given the space to make mistakes and develop into capable, independent scientists—a process that can take time, and that is more likely to pay off after a student has left an adviser's lab.

In some labs, graduate students are “treated like labor—like robots in a factory—rather than independent scientists,” he says. “They are just told to do some experiment and they have to stay in the lab day and night, 24/7.” That's not fun, he says, and the lack of autonomy doesn't help them learn what it takes to be a successful scientist. Shibayama recommends that prospective Ph.D. students look for advisers who let their students play a role in study design. “Students have to find someone who goes beyond their own interest,” he says. “Some professors are interested in producing good students, so choose those supervisors.”

Sverdlik adds that it's best to find an adviser who is willing to devote time to nurturing your development during critical phases of graduate school—during the transition from coursework to research, for instance—and who otherwise will give you room to grow on your own. “What we found in the literature is that when your supervisor just monitors your progress, and is willing to make time for you when you really need help, that is really all that is needed for students to succeed.”

To figure out what a professor's approach to advising is, Sverdlik encourages students to ask a lot of questions of prospective advisers and their advisees when they're interviewing. For example: “How do they work? Do they check up on you a couple times a week, or do they give you a task and they're OK not hearing from you until you complete it?” Prospective students will differ in their specific preferences, but overall, it's probably best to find a balance and avoid overly hands-on and overly hands-off advisers.

Academic credentials

to be supportive in a personal way," Dericks says. "That's more important than somebody who might have a famous name or someone who's particularly skilled."

That said, prestige can be a relevant consideration. The reality is that, in the long term, a reference letter from a well-known professor—and a degree from a top-notch university—can give Ph.D. holders a boost when they're searching for a job. According to a 2015 [study](#), 25% of U.S. institutions produce roughly three-quarters of all tenure-track faculty members in the three disciplines the team examined: computer science, business, and history. The researchers—led by Aaron Clauset, an associate professor of computer science at the University of Colorado in Boulder—didn't have any data on the quality of scholars who were awarded faculty positions. But given how much faculty-member production differed between universities, they suspected that faculty positions weren't given out on merit alone. The reputation or some other characteristic of an institution, they concluded, probably played a role.

So, a prestigious academic pedigree may help you get where you want to go after graduation. But if that's the only thing you take into consideration, you could wind up having a terrible experience in graduate school. "A bad or even just mediocre adviser can make your time as a doctoral student miserable or simply not pleasant, which could undermine the excitement that got you interested in research to begin with," Clauset notes. When his students come to him looking for advice about who they should work with next, he tells them not to weigh prestige too heavily. "It's far more important ... to have an adviser who supports your career goals and development, and who has your interests at heart, than it is to have a degree from an elite program."

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