Learning to mentor

Having a good mentor can determine the direction and probability of success for a young researcher. But mentoring takes skill, and institutions are paying attention to their training, says Virginia Gewin.

Lucy Godley, an assistant professor of medicine at the University of Chicago, has had mentors all her life. Beginning in high school and through college and graduate study at the Pritzker School of Medicine at the University of Chicago, where she had an appointed mentor, she has been helped by advisers and confidants to navigate the various issues of academic life. But now it is her turn to be a mentor, and she finds the responsibility daunting.

“My first graduate student starts soon and I hope to take the best of what I had and pass it on,” she says, expressing excitement but also trepidation.

Godley is not alone. Making the transition from having a mentor to being one is harder than one might think. Managing people, rather than experiments, is unfamiliar territory for many early-career scientists. Given the number of horror stories — about mentors who are uncommunicative, absent or even competitive — it is clear that not all graduate students have positive experiences to draw from. Institutions, individual departments and even online mentoring services are trying to identify the factors that can make more mentoring experiences positive.

Identifying traits
Understanding a student’s career aspirations is often the first step towards tailoring a mentoring style to an individual student, say these mentors. Identifying a student’s strengths and weaknesses may involve a difficult conversation, but this will often be one of the most fruitful. To get at a student’s individual needs may require a fairly in-depth exchange.

The Federation of American Societies for Experimental Biology has developed an informal checklist, dubbed the individual development plan (IDP), to offer a guide to mentors and students (see ‘Basic steps for mentors,’ left). Such checklists, although new to science programmes, are a staple in the business world.

To promote consistency, some institutions are creating mentoring programmes or putting new emphasis on programmes already in place. Both the Howard Hughes Medical Institute (HHMI)/Burroughs Wellcome Fund and the European Molecular Biology Organization (EMBO) have added mentoring to their programmes for training young investigators in a variety of lab management skills. EMBO’s Young Investigator Programme also provides a mentor for one year, including one paid visit to the protégé’s workplace.

Hopi Hoekstra, now an assistant professor of biology at the University of California, San Diego, says that the HHMI course helped her avoid mistakes from the beginning. Nonetheless, she says, she still had to learn to adapt her mentoring style to meet individual needs.

“I went in with the naive notion that students would be just like me,” says Hopi Hoekstra, left.
MINORITY MENTORING

Sometimes, female or minority students may have issues beyond those that come up with students in general. There are mentoring organizations that address these specific groups. For example, the Women in Natural Sciences Developing Opportunities in Mentoring programme at the University of Texas assembles both one-to-one mentoring pairs and small groups to help undergraduate, graduate and postdoc students find or become mentors.

Some initiatives, such as MentorSET — a UK-based mentoring programme (sponsored by the Association for Women in Science and Engineering and the Women's Engineering Society) — are designed to help retain women in science, engineering and technology. MentorSET offers free mentoring workshops to attract mentors. The American Biomedical Research Conference for Minority Students holds conferences to encourage minority students to pursue biomedical careers.

Creating an affinity group where scientists are helping students culturally, as well as professionally, is important, says Alberto Roca, a biochemist at the University of California, Irvine, and founder of the Minority Postdoc Summit forum.

Tea and coffee chats following mandatory attendance provides numerous opportunities to meet people for more informal networking, he says. The central cafeteria next to the lecture hall is always packed.

The network is tight where graduate students tend to arrive with different levels of education, experience and cultural backgrounds. There are networking opportunities at the University of California, Irvine, in comparison to what he calls his most important job: “I want a place where people want to come to work,” he says. “The lab runs — almost more like a business.” In the lab, success may mean helping a protégé to find or create a new role in academia. His students seem to convey a passion for the work. His students seem to convey a passion for the work. His students seem to...