

## Teaching for Success

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# BioScience

## Organisms from Molecules to the Environment

American Institute of Biological Sciences

### Teaching for Success

Students or postdocs in biology who are thinking of embarking on a career in academia will do themselves a favor by reading the Professional Biologist article that begins on p. 430, by Christine Fleet and colleagues. These authors surveyed faculty at an impressive number of academic institutions to assess the qualities they expect in job candidates. Their data identify a clear mismatch between the type of experience provided in most biology graduate programs and the type of experience sought by doctoral, master's, baccalaureate, and associate degree-granting institutions. Specifically, the results put numbers on the differing expectations at these institution types with regard to the number of publications and the teaching experience they look for in new hires.

It is perhaps not surprising that respondents at doctoral institutions put more stress on a strong publication record than respondents at associate institutions. What is more surprising is that only 34 percent of respondents at doctoral institutions expected hires to have been the primary teacher of at least one class. The conclusion seems unavoidable that, at doctoral institutions, strong teaching abilities are often seen as an optional extra to a strong publication record, not an essential complement.

Respondents at nondoctoral institutions put much greater emphasis on teaching accomplishment, with 57 to 67 percent expecting candidates to have been the primary teacher of a course. For job seekers thinking about work at a nondoctoral institution, it seems that working with undergraduates and designing a course may be at least as important for catching the eye of a potential employer as another publication. Nonetheless, Fleet and colleagues report that individuals at both doctoral and nondoctoral institutions see a significant shortfall in the teaching experience and skills of new PhDs.

Teaching experience is also important for science PhDs who will work in the nonacademic sector. This ought to be a significant consideration, because, as Eleanor L. Babco and Jolene Kay Jesse noted in *BioScience* last October (pp. 879–886), some 45 percent of PhD agricultural and biological scientists are employed outside academic institutions, and proportionately fewer biological and agricultural scientists have tenure or tenure-track positions than do other PhD scientists and engineers.

Many of those who are curious about the natural world seem drawn to the thrill of research, and maximize their efforts in that sphere. Too many come to see teaching as a relatively unrewarding chore. Yet the challenges now being put in the way of evolution education—to cite just one topical, though crucial, example—illustrate the need for excellent instruction in biology at all levels. PhD students should demand opportunities to learn how to be first-class teachers as well as researchers. There is much still to learn about what works best in science education, so the field offers plenty of scope for creative exploration. And for those who still find themselves lacking motivation to be serious about teaching, look at it this way: Biology students are at least as complicated and interesting as other study organisms.

TIMOTHY M. BEARDSLEY  
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