CAREER DEVELOPMENT : ARTICLES

E-Mail This Article Print This Article Share This Related Articles

Internships Offer Ph.D.s Early Leap Into Job Market

Lucas Laursen
United Kingdom
14 December 2007

Dalya Soond couldn't quite picture herself in the buttoned-down world of industry research. But her 3-year Ph.D. program at the Babraham Institute in Cambridge, U.K., was funded in part by an industrial partner, and the terms included a 3-month private-sector internship--also known as a work placement. Two years into her research on a mouse-model study of a gene pathway's role in the immune system, she joined UCB Celltech. She wasn't sure how she would fit into corporate culture or how well she would manage to juggle a new project with her ongoing Ph.D. research. "I was a little bit hesitant," she says.

Soond was pleasantly surprised. After her arrival at UCB Celltech, she found a way to apply her research to work that the company was doing in humans. "The project that I'm doing [at UCB Celltech] synergizes extremely well" with her Ph.D. work, she says. She plans to continue part-time with the company after her full-time commitment ends in December.

"It's like the television show *The Apprentice*: If you see someone for 6 weeks, you are a lot more convinced that they are the right fit for your company than if they turn up for an hourlong interview." --Rebecca Dowsett, University of Nottingham

Work placements can offer Ph.D. students some experience applying their skills in the real world and give them extra credibility and insight when they go on the job market. Doing a placement, Soond says, allows you "to re-evaluate not only your own research in new ways but also what you want to do in the future."

BUILDING SKILLS

Employability training has become a priority at U.K. universities since the 2001 Roberts' review called for so-called soft-skills training to complement research training for postgraduate students and research staff. "There's a broader movement in U.K. government thinking of how research is vital to the future economic success of the U.K.," says Ian Lyne, head of postgraduate career development at the Biotechnology and Biological Sciences Research Council (BBSRC). Job placements can be an effective tool for accomplishing this goal. Students who have done placements "hit the ground running" when they arrive on the job, Lyne says.

Some research councils encourage work placements through industrially funded studentships called Collaborative Awards in Science and Engineering (CASE). These grants are administered jointly by the research council and a (typically industrial) partner. They often require students to work with the industrial partner for a few months. BBSRC began giving out the awards in 1994; today, half a dozen research councils offer them. But not all formal programs are based in industry: For example, the Parliamentary Office of Science and Technology (POST) offers a long-established work-placement programme.

Internships can also be less formal. Students can often arrange an internship by approaching a company and requesting the opportunity to "ghost," or follow around, an employee for a few weeks.

GAINING INSIGHT

Working in a company before graduation can provide a lesson in applying skills to real-world problems. It can also "increase somebody's knowledge about whether they're going into the right field or whether they have the right skills," says Sarah Bunn, an adviser at POST.

Tim Price, an engineering student at the University of Nottingham, did a 6-week placement at Rolls-Royce's strategic planning office in his second year. "Rather than building skill," said his academic supervisor Philip Shipway, "Tim benefited from a clear vision of … how the skills that he had developed in his Ph.D. would be useful … in his career." Price researched companies that Rolls-Royce was considering acquiring--work that could hardly differ more from his Ph.D. research. But, says Price, "it all worked out very well." He took a job offer with Rolls-Royce's formal, on-the-job engineering training programme this fall.

Jerry Liu, also an engineering student at Nottingham, did a short placement at IMI Norgren, a fluid-control engineering firm. Because his university doesn't give time off from the Ph.D. for internships, Liu did his placement during his personal month one summer instead of going home to see his family in China. He's since accepted a job offer with another engineering firm.

Sarah Bunn

BUSINESS OFFICE FEATURES

Interdisciplinary Research—Building Bridges, Finding Solutions
23 November 2007

Diversity—Opening Doors for Scientists with Disabilities
16 November 2007

Careers in Neuroscience: From Protons to Poetry
26 October 2007

More

CAREER TOOLS AND RESOURCES

Current Employers
Learn more about the employers advertising positions on our site.

Science Careers Forum
Post a question, get an answer on our online community

Graduate Programs
Browse our database of program profiles

How-To Guides
Writing a resume/CV
Beating the interview
Getting funding
Managing a lab and staff
Building your network

Salary Tools
Find out how much you're worth with our salary calculator

To Advertise Find Products

The internship may also have helped Liu stay in the United Kingdom. As an international student, he might have had a harder time persuading employers to file the paperwork required for a work permit if he hadn't already had work experience in the United Kingdom, says Rebecca Dowsett, the manager of the University of Nottingham's Engineering Graduate Centre.

GROWING YOUR NETWORK

Conferences and small meetings offer students ample opportunities to meet and confer with their academic peers. But in a work placement, students can meet professionals from other sectors who don't frequent such meetings, identify nonacademic career paths, and make connections that become valuable during their job search.

Some students seek placements at companies where they hope to work eventually, as Price did with Rolls-Royce. It works, Dowsett says: "It's like the television show *The Apprentice*: If you see someone for 6 weeks, you are a lot more convinced that they are the right fit for your company than if they turn up for an hourlong interview." Even if a colleague from a work placement is unable to offer a job, they may know someone else in the industry who can.

Students who do internships are also exposed to a wider variety of career paths than they find out about in the academic world. "You find out what the opportunities are, not just in this organisation but in lots of others," Bunn says.

Mentioning a work placement on their curricula vitae earns students extra attention from employers. Work-placement veterans tend to make their next career steps with more confidence because they have a fuller idea of their options--and can expect employers to recognise their effort and awareness. Work placements, Lyne says, serve as evidence of a student's preparation to transition to industrial employment with minimal culture shock.

MAKING IT WORK

Jerry Liu

Work placements do provide some administrative challenges. Taking a break from your Ph.D. research may result in a change in your student status, so it pays to negotiate an explicit deal with the research council to keep Her Majesty's taxman at bay--or, for international students, to avoid violating the terms of student visas.

Students may not be experts in intellectual-property rights, but they can bet that industrial partners and their home institutions have lawyers ready to snatch any lucrative patents that might result from the work. That's fine; just be sure such things are arranged ahead of time. And then there's the issue of publications: An internship can be a bad career move if it limits your scholarly productivity. Says Soond, "Always make sure beforehand you can publish. Get it in your contract."

There's also the issue of time limits on Ph.D. funding--will a student have time for both an internship and their dissertation before the funding runs out? Dowsett says her program has a hard time getting students to do placements despite strong feedback from those who do it: "They view 4 to 6 weeks as a horrifically long time away from their studies." But, she says, plenty of students report that a month's placement helped shave 2 months off their Ph.D.

Bunn did an internship at POST during her Ph.D. and later took a job there. "My Ph.D. took longer than it would have otherwise, but I'd say overall that was a very minor drawback." The POST program arranges supplementary funding and extends Ph.D. deadlines for participants.

A work placement can make a student's Ph.D. work richer and it can provide benefits down the road. "This kind of thing can be a real eye opener," says Bunn. "It gives them a chance to try a different hat on and see if they like it."

Finding Postgraduate Internships

Your first step should be to see whether useful placements are already organized in your area of interest. If you have research council funding, check out what your council already has going. Also check with your home institution's career centre or with your funding body to see if they have an existing program--or at least experience in working with students who did internships.

If there's no precedent for you, have a go at it on your own, preferably with the blessing and support of your supervisor. Some tips to get you started:

1) Identify a partner.

- Ask your supervisor for ideas or contacts.
- If an outside company or institution interests you, identify a contact within the company who deals with internships or work training--or perhaps at least a contact your supervisor or colleague has worked with.

2) Clear the arrangement with the partner.

- Point out that you work cheap, you may later join the company, and you could start a partnership with your supervisor's lab.

3) Clear it with your supervisor and funding body.

- Get a written agreement to cover your status and that of your work.

Lucas Laursen is a science writer in Cambridge, U.K.

Photos. Top: Scott Bauer, Agricultural Research Service, U.S. Department of Agriculture. Middle, bottom: courtesy of the subjects	DOI: 10.1126/science.caredit.a0700180

RELATED CONTENT

Modeling a Career: Industrial Internships for Mathematicians
23 September 2005,

Science Policy: Establishing Guidelines, Setting Priorities
7 February 2003,

Internships and Postdocs: Why Bother?
12 July 2002,

E-Mail This Article | Print This Article | Share This | Related Articles

Magazine | News | STKE | Careers | Multimedia | Collections | Help | Site Map
Subscribe | Feedback | Privacy / Legal | About Us | Advertise With Us | Contact Us