

Things I wish I had done as a graduate student

David R Smith* 

Ah, yes, hindsight, always my weapon of choice—

Adrian Tchaikovsky

Since becoming a professor 10 years ago, I'm sometimes asked to sit as a panelist at graduate student career mentoring events. When this happens, I'm often at a loss for words. My assigned theme at these events is usually along the lines of "How to obtain an academic position" or "Surviving your first job interview," and involves me and other profs giving advice to aspiring academics. My fellow panelists and I typically begin by saying broad (often cryptic) statements like, "Effective communication skills are key," "Be sure to customize your CV," "Choose your postdoctoral supervisor carefully," and "Diversify your research portfolio." The students return with: "But what specifically did you do as graduate students that helped you get to where you are today?" "Well..." I say scratching my head, staring at my lap, and thinking to myself: it wouldn't be very helpful to reply with the words "I had lots of luck."

In fact, the more I talk with graduate students, the more I appreciate the great lengths that they must go to be competitive in the contemporary, cutthroat job market, both inside and outside academia. More and more, I'm left with the realization that they are much better prepared than I ever was at their stage, and this in turn has me thinking about all the things that I could have and should have done while I was in graduate school—not to mention all the things I should have avoided, including that quaint little cigar bar called Tom's Little Havana.

For instance, I'm embarrassed to admit the pitifully small number of seminars that I attended during my master's and PhD studies. Most university departments have a weekly seminar series where an invited speaker gives a lecture, meets with faculty, and has lunch with the graduate students. These talks are an excellent way to stay abreast of new research and observe effective (and ineffective) communication techniques. Likewise, the grad-student lunch is a perfect venue for seeking research and career advice and professional networking. I know of multiple students from my own department who have developed collaborations or secured PhD or postdoctoral positions just from attending a free pizza lunch with an invited speaker. Yet, these lunches remain poorly attended and our seminar committee is always on the verge of canceling them altogether.

I also regret not interacting more broadly in my department. Indeed, most of my MSc, PhD and postdoc years were spent at a lab bench or laptop computer, and I rarely interacted with other faculty, students or staff outside of my immediate research bubble. In hindsight, there were so many friendly, interesting and influential people in the places I studied who I could have reached out to, even if it was for a quick cup of coffee. Had I done so, I believe I would have had a better sense of community and felt less lonely and isolated during my dissertation and postdoctoral work. I know it can seem daunting to reach out to someone new, especially people in positions of authority, but you'd be surprised just how forthcoming some faculty can be when approached for advice or a friendly chat.

Similarly, I never took advantage of the many graduate-level workshops, courses and events hosted by my university's Teaching Support and Writing Support Centers. Consequently, I've spent the last decade catching up on communication and writing skills that I could have honed as a student. Not long ago, a MSc student from my lab completed his Certificate in University Teaching, which is an accreditation offered for free to all graduate students and postdocs at my university. The course involved giving recorded mock lectures, which were then critiqued, as well as attending workshops on eLearning tools and the theory and practice of teaching. He also developed strategies for finding focus and overcoming procrastination and learnt how to compose a teaching portfolio. If your university offers these types of programs—and most large to mid-sized campuses do—it is a shame not to take advantage of them.

This same student also helped organize both small and mid-sized conferences on campus, served on various graduate student committees, and volunteered widely, which are things I never did during grad school. These activities have given him insights into university administration, greatly improved his leadership and managerial skills, and provided a head start on developing a well-rounded CV—not to mention the countless number of friends and acquaintances he gained along the way.

One of the biggest changes I see in today's graduate students as compared to my cohort in the late aughts is their versatility, particularly their openness to and interest in non-traditional careers. Some of the students I talk with want to become professors, but many of them are at least

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considering and actively preparing for careers outside of academia. When I hear about the training activities in which these students are engaged—from career fairs to entrepreneurial workshops to being CEOs for a Day—I realize how unprepared and uncompetitive I would have been had I not been able to secure a fulltime academic position and had to look more broadly for employment. I'm also encouraged to see that universities are slowly—perhaps too slowly—recognizing that the goal of graduate school is not necessarily to generate professors but rather to train critically thinking, creative professionals for a wide range of careers.

Finally, during grad school I was never encouraged to communicate my research beyond the university walls. Science communication

and public engagement in general just weren't part of the curriculum. Thankfully, I found a passion for popular-science writing during my postdoctoral studies, which continues to this day. I now encourage all my students, both at the graduate and undergraduate level, to communicate their work broadly within the academic community and to the public. This can be done by writing articles and essays for magazines, newspapers and websites and through public lectures at schools or libraries, for instance. It can also be achieved by having a strong, targeted and mindful social media presence, which is quickly becoming an increasingly important component of professional life.

Like me, not all graduate students take advantage of the many resources and

opportunities that are available to them. Graduate school can be exciting as well as challenging, and often students are given a lot of autonomy. Although vital for creativity, this autonomy can lead to a lack of focus, direction and initiative. To be successful, graduate students need to be proactive in their training and education, targeting it to their specific needs. More importantly, supervisors must encourage their students to seek diverse experiences on and off campus and outside of the lab and library, and they must be open to them pursuing academic and non-academic careers. I thank my lucky stars that I'm not competing for jobs against the current crop of up-and-coming scientists. I wouldn't stand a chance.