



What do you wish you had known earlier in your academic and scientific career?

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Attending training sessions, such as new faculty orientation, can help you build skillsets for establishing a research program, developing teaching strategies, and advancing professionally. Photo courtesy of Flickr/Center for Teaching Vanderbilt University.

Many mistakes can be made early in one's scientific and academic career due to a lack of information. There are countless things that we wish we knew during our graduate studies and at the beginning of our careers. Of course, everyone's life experiences are unique, and we can all benefit from the lessons we've learned along the way. Here you will find some advice based on personal experiences as well as those from colleagues who have "been there, done that" and have shared their wisdom.

Take Training—Learn Skills

It's not easy to land your first academic, research, or industrial job. Therefore, it is important to establish career goals and remain focused on achieving them. It is critical to have the necessary skillset in order to have a well-established research program and accomplish your goals. Attending training sessions can help you build skillsets for establishing a research program, developing teaching strategies, and advancing professionally. Universities and organizations offer training such as new faculty orientations, professional development, mentor-mentee training, grant proposal writing workshops, diversity programs, etc. People in their early careers frequently rely on the thoughts and knowledge of those with more experience. Attending these training events will allow you to interact with colleagues and learn different strategies they use to teach, research, and collaborate.

Develop a vision for your research program and then plan and follow that developmental path. It is easier to plan than it is to execute. You may endure harsh criticism and opposition from peers, making you feel uncomfortable. If you're not uncomfortable, you're not growing. Don't take it personally because it's not about you but rather the area you are working in. Stay positive and develop an ability to accept constructive criticism and use it for your professional growth.

Expand Your Knowledge—Work With Passion and Publish Papers

Expanding your knowledge and trying new things is another piece of advice that can be applied to both early career and graduate students. Even if you think you know exactly what kind of specialization you want to pursue, you can keep exploring and experimenting with different options. Graduate students planning to start a career soon can pursue internships in academic settings and in industry that span different niches to learn new skills. Gaining a unique skill is never a bad thing; you never know when it might come in handy. You will likely gain a greater perspective of the research

world by broadening your knowledge and learning new skills, allowing you to establish an interdisciplinary research agenda.

Publication of your research findings is also a major factor in determining tenure and promotion. The phrase “publish or perish” describes the pressure to publish research in order to advance academic and scientific careers. Journal articles and books provide the greatest visibility for your research. It is essential to prioritize publishing during your graduate education and early career. Early publication success is critical for attracting employment offers, conference invitations, and requests to review and edit for journals. The publication process is highly competitive, and publishing in a high quality journal demands you to compete against experienced researchers. Being able to publish demonstrates your research significance and can advance your research program. Research, writing, and publishing all demand passion, so harness it to satisfy your curiosity.

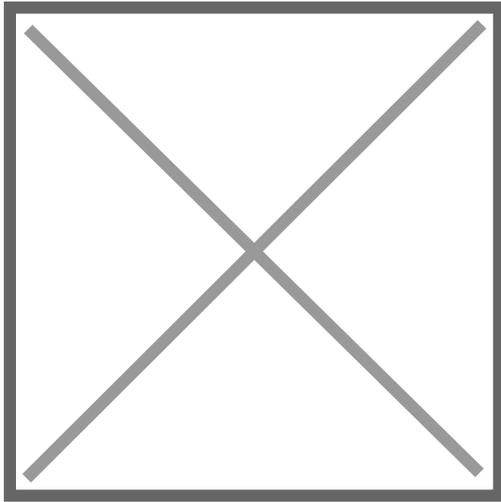
Never Burn Bridges—Be Polite and Kind

Never burn bridges; advice everyone might have heard before. It isn't only about making sure you don't ruin relationships, but also about making sure you nurture them. For example, the plant science research community is a small world. You'll find yourself crossing paths with the same people, especially once you specialize in a particular crop. As a student, one day, your mentors will become your peers. As a mentor, your students will graduate and begin research programs of their own. People you meet in passing at a conference might become a co-worker or the reviewer of a grant proposal you submit.

The point is that as you become specialized, the professional world around you shrinks. Take care that you are nurturing your relationships as much as nurturing your research. People remember when someone wrongs them. They also remember when someone

treats them with respect and compassion. Making friends in high places can be an incredible boon to your career. These benefits can be subtle, but even a small word in passing can make the difference in you getting that promotion or extra funding. Be polite. Be kind. Eventually, good things will come your way.

Networking and Visibility—Necessity of Good Communication



Involving yourself in active networking from the beginning of your career can significantly impact your program and help you build a network of allies and collaborators. Be smart while expanding your research network, and plan networking goals and strategies to make genuine research connections. Consider identifying institutions and possible

colleagues outside of your organization. Networking events commonly occur during conferences held on a national or international level. Participating in professional groups and associations can help you become a more successful researcher.

Often, visibility is more important than your ability. Almost everyone in the realm of research and academia is competitive in the skills required. It is critical that others are aware of and use your research. If you want to thrive, you need to build goodwill and strong relationships with your peers. You need to feel like you are part of the community and that you're making a difference.

Being visible is challenging for introverts. Seek opportunities to speak in front of groups during meetings, and avoid being intimidated by overly vocal people. Increase your confidence, feel more at ease talking about your ideas in meetings, take advantage of learning opportunities, expand your network, and demonstrate your research

experience to increase your visibility. One strategy is to utilize platforms such as Google Scholar, Academia.edu, Research Gate, and social media (Twitter, Facebook, blogs, etc.). Additionally, establish a website for your research, generate podcasts and videos about your research findings, and look for opportunities to engage in media interviews.

Work–Life Balance—Managing Time Is Essential

The first few years of your career are unquestionably the most challenging and crucial. As a researcher, you'll be expected to maintain a lab, bring grants, teach courses, mentor students, and develop collaborations, among other responsibilities. Unlike traditional 9-to-5 jobs, academia and scientific jobs are very demanding, and your work is never truly completed. While early-career researchers face numerous challenges, allowing for a life outside of work will help them reach their professional goals in the long run, achieve a healthy work–life balance, and stay in good physical and mental health. When it comes to managing work–life balance, time management is essential for success. Personal time can be invested by scheduling time away from work or by going on vacation without carrying your work with you.

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