

THINGS I WISH THEY HAD TOLD ME*

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Most of us on college faculties learn our craft by trial-and-error. We start teaching and doing research, make lots of mistakes, learn from some of them, teach some more and do more research, make more mistakes and learn from them, and gradually more or less figure out what we're doing.

While there's something to be said for purely experiential learning, it's not very efficient. Sometimes small changes in the ways we do things can yield large benefits. We may eventually come up with the changes ourselves, but it could help both us and our students immeasurably if someone were to suggest them early in our careers. For whatever they may be worth to you, here are some suggestions I wish someone had given me.

- *Find one or more research mentors and one or more teaching mentors, and work closely with them for at least two years.* Most faculties have professors who excel at research or teaching or both and are willing to share their expertise with junior colleagues, but the prevailing culture does not usually encourage such exchanges. Find out who these individuals are, and take advantage of what they have to offer, if possible through collaborative research and mutual classroom observation or team-teaching.
- *Find research collaborators who are strong in the areas in which you are weakest.* If your strength is theory, undertake some joint research with a good experimentalist, and conversely. If you're a chemical engineer, find compatible colleagues in chemistry or biochemistry or mathematics or statistics or materials science. You'll turn out better research in the short run, and you'll become a better researcher in the long run by seeing how others work and learning some of what they know.
- *When you write a paper or proposal, beg or bribe colleagues to read it and give you the toughest critique they're willing to give.* Then revise, and if the revisions were major, run the manuscript by them again to make sure you got it right. *Then send it off.* Wonderful things may start happening to your acceptance rates.
- *When a paper or proposal of yours is rejected, don't take it as a reflection on your competence or your worth as a human being. Above all, don't give up.* Take a few minutes to sulk or swear at those obtuse idiots who clearly missed the point of what you wrote, then revise the manuscript, doing your best to understand and accommodate their criticisms and suggestions.

If the rejection left the door open a crack, send the revision back with a cover letter summarizing how you adopted the reviewers' suggestions and stating, *respectfully*, why you couldn't go along with the ones you didn't adopt. The journal or funding agency will usually send the revision back to the same reviewers, who will often recommend acceptance if they believe you took their comments seriously and if your response doesn't offend them. If the rejection slammed the door, send the revision to another journal (perhaps a less prestigious one) or funding agency.

- *Learn to identify the students in your classes, and greet them by name when you see them in the hall.* Doing just this will cover a multitude of sins you may commit in class. Even if you have a class of over 100 students, you can do it—use seating charts, labeled photographs, whatever it takes. You'll be well compensated for the time and effort you expend by the respect and effort you'll get back from them.
- *When you're teaching a class, try to give the students something active to do at least every 20 minutes.* For example, have them work in small groups to answer a question or solve a problem or think of their own questions about the material you just covered.¹ In long class periods (75 minutes and up), let them get up and stretch for a minute.

* *Chem. Engr. Education*, 28(2), 108-109 (Spring 1994).

¹ For other active learning exercises, see R.M. Felder, "Learning by Doing," <http://www.ncsu.edu/felder-public/Columns/Active.pdf>.

Even if you're a real spellbinder, after approximately 10 minutes of straight lecturing you begin to lose a fraction of your students—they get drowsy or bored or restless, and start reading or talking or daydreaming. The longer you lecture, the more of them you lose. Forcing them to be active, even if it's only for 30 seconds, breaks the pattern and gets them back with you for another 10 to 20 minutes.

- *After you finish making up an exam, even if you KNOW it's straightforward and error-free, work it through completely from scratch and note how long it takes you to do it, and get your TA's to do the same if you have TA's.* Then go back and (1) get rid of the inevitable bugs and busywork, (2) make sure most of the test covers basic skills and no more than 10–15% serves to separate the A's from the B's, and (3) cut down the test so that the students have at least three times longer to work it out than it took you to do it.
- *Grade tough on homework, easier on time-bound tests.* Frequently it happens in reverse: almost anything goes on the homework, which causes the students to get sloppy, and then they get clobbered on tests for making the same careless errors they got away with on the homework. This is pedagogically unsound, not to mention unfair.
- *When someone asks you to do something you're not sure you want to do—serve on a committee or chair one, attend a meeting you're not obligated to attend, join an organization, run for an office, organize a conference, etc.—don't respond immediately, but tell the requester that you need time to think about it and you'll get back to him or her. Then, if you decide that you really don't want to do it, consider politely but firmly declining.* You need to take on some of these tasks occasionally—service is part of your professorial obligation—but no law says you have to do everything anyone asks you to do.²
- *Create some private space for yourself and retreat to it on a regular basis.* Pick a three-hour slot once or twice a week when you don't have class or office hours and go elsewhere—stay home, for example, or take your laptop to the library, or sneak into the empty office of your colleague who's on sabbatical.

It's tough to do serious writing or thinking if you're interrupted every five minutes, which is what happens in your office. Some people with iron wills can put a "Do not disturb!" sign outside their office door, let their secretaries or voice mail take their calls, and Just Do It. If you're not one of them, your only alternative is to get out of the office. Do it regularly and watch your productivity rise.

- *Do your own composing on a word processor instead of relying on a secretary to do all the typing and correcting.* If you're a lousy typist, have the secretary type your first draft but at least do all the revising and correcting yourself.

Getting the secretary to do everything means waiting for your job to reach the top of the pile on his desk, waiting again when your job is put on hold in favor of shorter and more urgent tasks, waiting yet again for the corrections on the last version to be made, and so on as the weeks roll merrily by. If a job is really important to you, do it yourself! It will then get done on *your* time schedule, not someone else's.

- *Get a copy of McKeachie.³* Keep it within easy reach. You can open it to any page and get useful suggestions about every aspect of teaching and research backing for them.
- *When problems arise that have serious implications—academic misconduct, for example, or a student or colleague with an apparent psychological problem, or anything that could lead to litigation or violence—don't try to solve them on your own. The consequences of making mistakes could be disastrous.*

There are professionals at every university (academic advisors, trained counselors, attorneys) with the knowledge and experience needed to deal with almost every conceivable situation. Find out who they are, and bring them in to either help you deal with the problem or handle it themselves.

² If your department head or dean is the one doing the asking, however, it's advisable to have a good reason for saying no.

³ W.J. McKeachie, *Teaching Tips*, 11th Edn., Boston, Houghton Mifflin, 2002.