

How to mentor PhD students
Wise words on advising / supervising from academics & PhDs
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I sent the following to the University of Queensland School of Psychology e-list for academics in June 2014:

What are 1-3 things that you learned from your own PhD advisor about how to mentor PhDs? (about any aspect of mentoring research / teaching / service – whether concrete things like how to act or how often to meet or abstract like important values & attitudes ... could also be negative lessons like what not to do)

Since you started, what are 1-3 things that you now have learned about mentoring PhDs which are also important about what to do / not to do?

I received 11 responses / ~50 staff, and these are pasted below (along with other advice that people have sent in since). I sent a follow-up to these to see if anyone had specific tips about teaching/service and I have posted the associated advice with the two respondents. I mention the ratios to make the point that there is probably a lot of other good advice out there, so people should chat with their own mentors about these issues.

I also sent the following to the PhD students' e-list:

What are 1-3 things that you have learned so far from your own PhD advisor about how to mentor PhDs? These could be negative lessons also (like what not to do). If you reckon you have not learned anything so far on this topic from your advisor, I also would be interested in hearing that.

I received 3 replies / ~100 students and these appear at the end.

If anyone would like to provide any further advice or tips, I am happy to receive and compile e-mails. I will update this every now and again. (A few others have already sent tips since I first circulated this to the School.)

You are very welcome to circulate this further as long as you retain the attribution above. Feedback by e-mail is appreciated.

Academics

Learned from my own advisor:

1. Always finish a meeting with a clear agreement on what the student is going to do next and when you will meet again
2. In the initial stages, give the student space to develop their own ideas but place some constraints (eg time guidelines) on the planning process
3. A well-designed PhD project is one that will produce interesting results regardless of how the data turn out

4. Integrity and research ethics are what makes it a PhD and not just a whole bunch of words

Learned as an advisor:

1. Listen to the student, understand them as a person. What are they doing a PhD for? Where are they going? What else is happening in their lives?
2. Encourage students to learn new techniques/try new methods/push themselves into new areas, not just do the safe things
3. Encourage them to do side projects with other people
4. It's all about the student

Further advice:

Mentoring – it's about them not about you. Listen.

Teaching – it's all about roles. If you walk in and play the role of a tutor/lecturer, they will play the role of student. If you walk in and play the role of nervous newbie, then maybe not.

- Preparation, preparation, preparation
- If you don't know something, say so, don't fake it.

Service roles – everyone has to do it. If you want to whinge about the waste of your precious genius time, do it at home with the cat. At work, pretend you are happy to help out.

- Be organised.
- Follow through on commitments.

Dealing with students in general – it is a privilege to be involved with them, but if they think they are in trouble, some may succumb to the temptation to fib. Truth-test any claims about what other academics said they were allowed to get away with, what previous results they have got, what happened to their assignment, etc.

General advice for academia – “We're all smart. Distinguish yourself by being kind”.

My PhD supervisor had me as her first PhD student. She was a great supervisor in many ways but did little to no career mentoring, I suspect because she was so early in her own career. So I guess one thing I learned was have someone on your supervision team who is experienced and preferably has a reputation for being a good mentor.

Since then I learned the following.

1. Networking is crucial for PhD students, create opportunities for PhD students to meet and talk with key researchers in the field. I have a ritual of going to lab dinners of leading research colleagues during international conferences and asking to take along a student or two. I try to involve students with dinners when I have visitors, and give the students the chance at those dinners to speak on their work as well as hear what the visitor is doing.
2. Give PhD students the chance to co-review papers with you when you serve on editorial boards. In doing the reviews, seeing the other reviews and the outcomes students learn a lot about writing articles.
3. Facilitate peer support linking PhD students together and encourage celebration of achievements within that group (e.g., completion of milestones, acceptance of

publications, good presentations, etc.) Building a habit of providing and seeking peer support makes a big difference to sustaining a research career.

Further advice:

One additional tip on service: I suggest people identify one thing they could do on a committee that would make things better. Check out possibilities with fellow committee members and select something to take on as a project. That way you feel you are doing something useful, and you have something to show for what you contributed that you can point to.

On teaching a tip I would suggest is seek peer feedback on your courses. Ask someone who teaches a similar course elsewhere to review your curriculum and write you an email on what they think. Students can tell you if they like the presentation but they are not as good at giving advice on what content might have been missing. Peers can provide that advice. Ask your expert peer for permission to reproduce their feedback in your portfolio, and describe how you used the feedback to enhance the course.

Learned from my own advisor:

These things have stayed with me for many many years – I was very close to and influenced by my supervisor (known ever since as my sainted PhD supervisor):

** How to have a strong intellectual working relationship beyond the thesis – I really valued the many discussions we had on every topic in psychology, communication, and beyond

** How to be totally positive about your work, and totally confident about yourself – he was an inspirational role model in dealing with criticism, adverse attitudes of colleagues, not being a slave to fashion, and staying dedicated to making a real difference – talking to him was always a confidence-booster

** How to survive a relationship crisis and keep working together – we had a very bad falling out late in my thesis, but – partly because our relationship was close by work-related rather than social – we managed to keep going and I got the thesis in – I only realised later how important (and uncommon) this is

Learned as an advisor:

** Provide a lot of structure and guidance – I didn't have this (and maybe didn't need it), but I have realised how many students do, especially in the early stages – things like regular scheduled meetings, getting students to keep minutes and action sheets, even (heaven help us) Gantt charts

** Give guidance in networking, career, and the like – push students into opportunities (they don't necessarily find them for themselves) – things like getting students to present at (international) conferences, connecting with top researchers, finding collaborators, etc. – the Australian system can be very isolating

** Find ways that students take responsibility for themselves and their work, and don't become co-dependent with you (this came hard to me, but I got there – it's connected to being totally positive but still setting high bars)

Learned as an advisor:

Re question 2, the importance of writing every day (even a little bit!) through the candidature RATHER than saving up writing until the end.

Learned from my own advisor:

Getting written feedback on drafts means that time and care was spent on my work (it does not mean I'm useless or that my advisor is mean).

Doing stats incorrectly is not a useful learning experience.

Learned as an advisor:

One size does not fit all. Be flexible in the amount of support/guidance provided.

Get students to set and then revisit timelines.

Meeting with postgrads in small groups instead of 1 on 1 can be a good thing – greater peer involvement/support for them, fewer meetings for the advisor

Learned from my own advisor:

1a. The great thing about my supervisor was his passion for science and his endless enthusiasm for both ideas and data. We had some great conversations and he was truly inspirational.

1b. The down side was that he wasn't very realistic about what was required for the PhD and didn't keep me on track for completion (instead he kept encouraging me to take new directions and do more and more experiments!). So this is something I took away for my own role as a supervisor.

Learned as an advisor:

2a. In my own supervision I realised quickly that a PhD is not an end in itself; it's a ticket to a research or academic career. I have learned to encourage students to think about getting some papers and proving that they can do research as the primary goals of the PhD – not a long search for THE earth-shattering finding.

2b. I have also learned that students need to learn various bits of our art that we take for granted – especially writing for publication. I try to get them writing early and (unlike my supervisor) get them continually thinking about where the project is going and how the experiments will hang together to tell a story for the thesis.

2c. I try to get my students to do as I say (not as I do) in terms of career management. In particular I agree with [] that confidence and exposing your idea and research at conferences

etc are important. Also they need to be advised about collaboration, strategies for research funding and the like. These things don't necessarily get absorbed by osmosis.

Things I learned from my supervisor

-Treat the PhD as a job – in the sense of keeping regular hours (e.g. 9am to 5pm Monday to Friday). This will make it much more likely to get it finished in a reasonable time frame.

Learned as an advisor:

-Some students thrive when given free rein in terms of managing themselves. Others really need a harder structure with deadlines, regular meetings, motivational chats, etc. The trick is trying to figure out in advance which approach is best for a particular student.

-Students need to have a clear, realistic, and informed idea of what they want to do after the PhD – as this will (1) clarify whether they really ought to be doing a PhD at all (2) determine their focus within the PhD (e.g. consultancy work versus becoming an academic).

From advisor:

1. Give students autonomy instead of steering them towards your own research agendas. Let them do crazy studies that seem fun or interesting. Balance direction and strategy with inspiration and encouragement.
2. Don't rush for them to finish – they need to finish at the right time when they can be launched into a career. Sometimes you might have finished the thesis but delay submission to get more papers or tick over into the next calendar year. Eligibility for early career fellowships, grants, etc.s often means that Jan 2015 has a big advantage over Dec 2014.
3. Encourage students to go to big conferences, talk to famous people, write ambitious theory pieces - leave their comfort zone.

Things I've learned on the job:

1. It's hard to attract students. Sometimes possible students need to be guided not to do a PhD with you because there's other people they should work with. It's good to send honours students to work with other people because that helps them to develop intellectually.
2. If a student misses a deadline with you, do not just roll it over. Break it into sub-tasks and set new micro-deadlines closer together.
3. Students should write throughout their PhD (I think it's good to collect data and write it up in their first year) and present the project to lab groups and at conferences in order to get a wide range of feedback that can improve the later studies and direct the project.

Things I learned from my supervisor

Hierarchy is important

Patience

Work as hard as possible

Learned as an advisor:

Each student is an individual

Have a program of research within a lab

Push the envelope with questions and use a variety of methods

Things I learned from my supervisor

- Just write, don't wait for inspiration it may never come.
- Dream big then make the plans for the details. You can do groundbreaking work in a PhD.
- Apply for funding you may just be successful and it is a great skill to have.
- Networking is essential. Be proactive and start planning of your future early.
- Media liaising can be helpful

Things I have learned

- Essential to meet regularly even just to check in. (don't assume students will come to you if they are in trouble).
- It is their work. Let them learn themselves rather than giving them everything.

From my PhD supervisor, I learned that you should not take on a student unless you are **crucially interested** in their project (mine wasn't). Otherwise, inevitably, the disinterest comes through and that can be soul-destroying; especially when your lab siblings get all the attention.

From my early attempts as a supervisor, I learned that **you are their guide, not their friend**. Once in a while you should do social things with them, but you should not seek information about their social network or habits, or tell them about yours. It breaks the boundaries (there's a good reason the APS code of ethics carries on about boundaries), they treat you as a parent and then they project all sorts of stuff on to you.

From advisor:

1. Turn around drafts quickly (it makes the world of difference)
2. Be supportive (weird shit always happens during a PhD, and an advisor that is supportive can mean the difference between finishing and quitting)
3. Encourage students to do everything! (yes I will give that talk, yes I will contribute that x, yes I will enter into a collaboration with that eminent intimidating guy)

Stuff I know now:

1. Each PhD student has their own particular quirk/quirks, so it is really important not to have a one size fits all approach, or expectations

2. Have a thick skin
3. Set good deadlines

What students say they have learned about mentoring PhDs

Good question. I am near the end of my PhD and am grateful that I have had a very positive experience with my supervision. I am happy to give my perspective.

Three things I have learnt are helpful for supervisors to do in mentoring PhD students:

- Recognise the students' strengths and demonstrate belief in the student's abilities
- Vary supervision according to needs of student (i.e. one size does not fit all)
- Encourage clear and open communication before and during about issues which may in some cases cause dispute, e.g. about authorship of papers

I have learnt that as a potential future PhD mentor

1. I should leave my ego at the door (it is their project and decisions/advice should be given with their best interest at the fore front, don't take things personally)
2. Always keep notes of what is discussed in meetings and email exchanges

I would also like to comment that I don't think there is enough attention given, generally speaking, to teaching PhD students how to mentor PhD students.

1. If your PhD student comes with Depression, Anxiety (or any other developmental disorder/mental illness!), insist that they are in treatment with a CBT/DBT therapist for the entirety of their PhD. A PhD is not for the faint-hearted and a supervisor can only provide so much support before they burn out themselves. A student with "special needs" needs extra support and an advisor shouldn't be providing it. Personally, having a regular therapist has been an invaluable additional source of support, advice, and problem-solving/strategizing. At first I resented my advisor for insisting on this, but now I think it was a stroke of genius and a suggestion I wouldn't have survived if we had not implemented it.
2. Do not take on too many PhDs at one time. It really does feel like "oldest child syndrome". You start out with lots of undivided attention from your advisor and then as the numbers increase it gets harder and harder to get *quality* time with them and to feel like they are keeping up and giving you their best.
3. Be flexible! Different students come with different set of abilities and life circumstances. A one-size-fits-all is not going to be the best approach to managing PhDs.

- It's important to have regular meetings and to set writing deadlines. This will maintain a gentle pressure to produce work, and also form the habit of submitting and revising writing, which is a great way to develop a regular writing habit.
- PhD students sometimes don't know what they don't know - it's good if supervisors keep an eye out for opportunities, like conferences or networking, that PhDs might not be aware of and steer them in that direction.
- There are some excellent resources around for PhD students that can complement the mentoring approach that supervisors take e.g. Petre and Rugg's *The Unwritten Rules of PhD Research*, or Mewburn's *How to Tame Your PhD*. I found these on my own, but once I read them I had a better understanding of why my supervisors were insisting on certain things or pushing me in particular ways. I would recommend these to PhD students at the outset.

My supervisors each have their particular strengths, and one of the main ways I benefit from this is watching them in action and seeing how they handle particular situations e.g. conducting assessments with research participants, negotiating research team politics, chairing difficult meetings. This is a very different experience than supervision meetings or written feedback but equally valuable in terms of learning.
