WHAT IS IT LIKE TO BE A PhD STUDENT? ADVICE TO PROSPECTIVE SUPERVISORS

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Introduction

I am speaking from my experience as a PhD student in Molecular Genetics at the John Curtin School of Medical Research. However, I think that the experiences I talk about today are relevant to students of all disciplines. I have had the opportunity to speak to many PhD students from the ANU, from other universities, and from a wide range of disciplines about their PhD. One recurrent theme is how surprised their supervisor is with them. Supervisors are apparently unprepared for the way their student behaves and how that student copes with the trials of a PhD project. I recall my own supervisor walking in on myself and the two other female students in the lab while we were in the middle of a major episode of weeping, wailing, tears of frustration, and mutual support (which is a common occurrence in our lab). I could see it on his face: "This never happened to me. This cannot be normal . . . can it?".

If there is one thing that will be true of every student you ever supervise, it is that they will never be just as you were when you were a student. The worst thing you can do is tell tales of "When I was a student we did blah, blah, blah . . .". Firstly, every student is different, so it is probably not relevant, and secondly, it is a guaranteed way to annoy your student.

Student Versus Reality

The ideal student tends to be a person who has been out in the real world for a few years, had a real job, and decided that a research career is what they really want. They will approach their project in the mature and considered fashion of the person who is finally doing what they have spent the last few years thinking about.

The reality is somewhat different. Many students are very poorly prepared to cope with a PhD project. Some will have come straight from school to university, to Honours and then to a PhD project. They have had no experience of the real world. As rewarding jobs become increasingly unavailable even to students with an Honours degree, prospective PhD students are inclined to think "Well, I can't get a job with my degree and I liked my Honours project, so why not do a PhD? It can't be that hard!". These are students who will have spent their undergraduate years demonstrating known principles of their field. A research project, on the other hand, is doing something every day that no-one else has ever tried. So even when you get 'it' to work, you may not necessarily have shown what you wanted.

These are concepts that you, as experienced researchers, will be familiar with. Research is often fruitless and the rewards are few for an enormous amount of
effort. This reality can hit some PhD students like a Mack truck, even for those with experience of the 'real' world. Coping with it usually represents the biggest obstacle in any student's project and they will be totally unprepared for it.

Approximately 60% of current Australian PhD students will not go on to a research career. This is partly because there are few postdoc opportunities in Australia and even fewer jobs after that. Another reason is that not everyone is suited to research. It takes a peculiar person to seek hard-won, poorly paid, temporary contracts, in an under-recognised profession, for little reward. A friend of mine who is a highly respected professor in his field advised me, "Only do research if it would kill you to be doing anything else. If you think you might be happy in another career don't do research." The sooner you make your students aware of this, the better prepared they will be for that question, "So what am I going to do with the rest of my life?".

A student coping with these and other tribulations, such as "having a life", can appear quite odd. Is my student normal, you might ask? I thought I would point out some normal aspects of student behaviour that you can expect.

Is My Student Normal? Negative aspects of student behaviour you can look forward to

• What am I doing here?

As I mentioned before, some students will start a PhD project, essentially because they had nothing better to do. Others will begin with a fixed idea of how it is all going to be and then be struck by a more unpleasant reality. The question of "What the hell am I doing here?" inevitably arises. An answer will hopefully emerge; how convincing it is will determine whether or not that student submits a thesis.

• I am way too stupid for this

A student will often mistake inexperience for stupidity, which leads to the perennial problem of feeling inferior. Students have incredibly high aspirations, very little experience and only fledgling ability. They want the Nobel prize, they want to change the face of their field and yet nothing seems to work first time as it should. In addition, being compared to the example of Rolf Zinkernagel, who won last year's Nobel prize for Physiology or Medicine for the work in his PhD thesis at the John Curtin School, is not necessarily the greatest motivation.

• How do I talk to my supervisor without making him/her think I'm a moron?

Part of the relationship between a supervisor and student should be based on a sense of intellectual equality. In theory, all you should see is two like-minded researchers discussing interesting points about their field. In reality, the average student spends at least the first half of their project opening their gob in front of their supervisor and saying silly things in an attempt to impress them, and then feeling really humiliated.

• I hate my project

After a while, the novelty of the PhD has worn off, a mound of papers has been read, a number of approaches or theories have been tried to no avail and
disillusionment sets in. Rather than providing inspiring heights of intellectual wonder on a daily basis, a PhD can be a real grind. Motivation begins to wane and at some stage we've all hated our projects with a passion. Prolonged periods of disillusionment and failure can lead to . . .

- My project hates me

. . . which may sound ridiculous, but in the face of intractable problems, conspiracy theories abound. At this point, a student may spend more energy in avoiding you, the lab/office, and their project than on anything else.

- My supervisor made a mistake!

Students often think that the success of their PhD is going to determine the success of their whole life, not just that of the next three years. As their supervisor, you are therefore responsible for the rest of their life. A lifetime of success (or failure) is in your hands. The first mistake you make in front of your student will be greeted with horror ("How could you be so irresponsible? You're going to ruin my life!"), and possibly glee ("nerny, nery, ner!").

- My supervisor is a _______ (insert preferred term here)

An environment of conflicting expectations and truths does not make for a fabulous student-supervisor relationship. Someone has to be at fault and it's going to be you, whether you deserve it or not. As part of a curious dichotomy, another aspect is:

- My supervisor thinks I'm a _______ (insert preferred term here)

- which usually arises after a prolonged period of no results, poor motivation, and your asking harmless things like "So did you get anywhere with that idea you had the other day?"

Finally, even if some progress has been made, the amount of work which remains to be done seems insurmountable, the amount of disposable income minuscule, and a social life something that only undergraduates have, hence:

- My project is killing my life

- teamed with the realisation that job prospects are not necessarily any better than they were with just an Honours degree and that a research career is just a series of slightly better paid three year contracts, there comes:

- There are no jobs, I'm never going to get a job, I'M WASTING MY WHOLE LIFE.

At which point you inadvertently discover your student in the lab or office in a screaming, wailing heap which you were never meant to see.

Of course there are positive aspects of student behaviour which are:

- I got a result/I had an idea that worked

- My paper got accepted
• WAHOO!

Out comes the champagne.

What You Should Know

The supervisor of a student experiencing all this will probably be blithely unaware of much of it. The students you think have escaped this are just better at hiding it. Most difficulties happen after the first 12 to 18 months, particularly following extended periods of non-achievement. Admitting this to you is an admission of defeat.

A student-supervisor relationship can be like an marriage. Each person will become intimately acquainted with the other's irritating habits and personality flaws. Each will also have 'fat days' and be less than perfect to be around. You will each discover the precise nature of how your expectations do not match.

Once the student begins to own their project, to direct it and develop it beyond the idea you presented at the outset, these difficulties will lessen. By the two or two-and-a-half-year mark, your student should be one of perhaps a dozen experts in the world on that particular aspect of their field. They should be telling you things you didn’t know, drawing papers to your attention, and shaping their project out of all recognition.

Your Role in This Minefield

• The doable project

A supervisor cannot prevent the traumas which a PhD project can present, but you can start a student on a doable project; a project which can be completed and written up within three years. Unless you can guarantee funding beyond that time you have no business encouraging a student to look at a three years and six months or a four year timetable, as used to be the case.

A successful project will also be multi-faceted: it should not rely on one thing alone. The majority of crash-and-burn disaster stories have arisen from a project which relied on one thing - which didn't work. A variety of things to work on will also provide something else to work on when one avenue of investigation is proving fruitless, something to maintain interest.

• A supervisor should also make expectations clear at all times, rather than hoping that a student will get the picture from pointed remarks or stony silences.

• Providing positive encouragement as well as constructive criticism will make a huge difference to a student’s outlook.

• Encourage your student to have a life: a happy student gets more results.

• Encourage your student to broaden their skills base, through preparing for conferences, teaching, tutoring, computing or other avenues.
• If you discover the student does not have what it takes to successfully complete a PhD, tell them as soon as you suspect, do not abandon them and become their Master’s Degree supervisor instead.

• If nothing else: communicate with your student.

Most problems between student and supervisor arise from lack of communication and can be solved by more of it.

Thanks for your time.

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