



# HOW TO SUPERVISE (AND BE SUPERVISED) ON A RESEARCH DEGREE

*Tips and tools for supervisors and students*



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# **Chapter 1:**

## **Getting started**

Getting started on a research degree, such as a PhD, is pretty much like starting on a journey. You probably know at which destination you want to arrive; you have a fair idea of how you hope to get there, and you have a rough idea of how long this journey will take. You will also have only a very vague idea of the other things that will happen on this journey – the potential obstacles, the opportunities, or the people that you will meet along the way – or how you will cope with these new experiences. Like many big journeys, you will start out with a mixture of excitement and apprehension. Unlike most geographical journeys, however, the experience of undertaking a PhD provides the student traveller with an expert support-team to guide and advise on each step of the way. This support-team is called a supervisory panel. For them too, the new research project will be a new experience, for though they have experience in the academic discipline, the unknown factors are the precise nature of the study and the interaction between the

student(s) and supervisor(s). Usually there will be a Director of Studies, who is the main supervisor, and a Second supervisor, who will bring supplementary or complementary experience to the advisory process. There are a lot of diverse factors that will help to determine the quality of the final PhD submission, but essentially it is the nature of the interplay between the student, the subject matter, and the (usually two) supervisors that is at the core of the whole experience.

We will deal later with each of these components in turn, but for now let's just focus on getting started. Usually the student embarking on a PhD has already performed well in a relevant undergraduate degree (or perhaps also a taught Master's degree) and wants to get more deeply engrossed in the subject area. This is a good start, but it is not enough. There is a key responsibility at a very early stage for the lead supervisor to help articulate quite clearly the shape of the tasks ahead. By this we mean, not just helping to define the wording of the main research question (or the hypothesis) important though this stage is, but also to give very clear and gentle guidance on the level of what is

expected, the standards to aspire to, and to inspire confidence that this complex task can be simply broken-down into manageable, well-paced sub-tasks, which the student is perfectly capable of undertaking.

It is also crucial not to hype-up the PhD study process so that the student is intimidated and deflated before they even make a proper start. There are many aspects of self-directed research that are daunting, challenging, and frustrating, but the role of the supervisor is to work with the student to put these challenges into perspective and to seek a way through to the next level. It is therefore important that a balance between realism and optimism is struck during these early stages. The supervisor should not minimise the likely challenges ahead – breaking new ground is part of the attraction for all researchers, young and more elderly – but neither should a responsible supervisor seek to ‘scare’ a student into action by emphasising the scale of the obstacles. We have often told students that a PhD is only 70% intelligence and 30% stamina (we can argue about the exact figures later!) and the point of this is that lots of clever people embark on research for a doctorate but never

complete it. This is not because they are stupid people, they have already demonstrated that they are not that by their ability to get accepted for a PhD registration. Rather it is because the long slog of research at this level – the scoping, preparation, leg-work, desk-work, frustrations and imponderables that have been discovered – is simply more than they are prepared to endure for the rewards on offer.

It seems, therefore, that starting to study for a PhD is much like starting on any new job. On your first days at work you want to feel comfortable, both with your environment and your colleagues. The induction is simple, and after all, mainly common-sense. The student needs to know where to find things that are going to be useful, everything from the desk and chair where they are going to sit, to the facilities that they will be using – the tea-room, the toilets, the laboratory, the library, and so on. They also need to be introduced to the people they will be working with – their fellow postgraduates, the academic staff, the support staff, and most of all, their supervisors. This is going to be the case whether the student has newly arrived at the university or has already studied there for several years. In the latter

case, the evolution from undergraduate to postgraduate might be deceptive, because although there might already be an established familiarity between the students and staff, this relationship will be necessarily but subtly changed. When a postgraduate student embarks upon a PhD they are normally treated as an honorary, if temporary, member of staff. They will have more generous permissions for library and IT services than they had as an undergraduate, they might be encouraged, or even expected, to acquire a teaching commitment in the department, and they will certainly be expected to hold their own in academic discussions when their subject area comes up.

In all of these changing circumstances, the supervisor has a mentoring and advisory role for the student, and this relationship needs to be established at the outset. Although the precise topic of the PhD study may have been decided by the supervisor, who has raised the money to support a student, then interviewed and appointed a likely candidate, the fact is that from the moment of embarkation, the research topic is owned by the student, not the supervisor. The student must go from a standing start to becoming a

recognised expert in this area of research, and this can only be achieved if the student makes the subject their own territory. The role of the supervisor(s) is to help the student to develop the skills to complete the task. Obviously, the supervisors have a vested interest in the student reaching a successful outcome, but this stops short of actually doing the work for them. The distinction is that the supervisors have already won their own PhD, it is up to the student to rise to the occasion and prove their own abilities.

To start with, this is hard. Possibly the student is over-awed by the reputation of the institution, or the supervisors or by the academic language that is used to phrase the nature of the challenge. Conversely, they might initially think that this is a continuation of their undergraduate work and that they just need to turn up in class often enough and take good notes in order to pass. Traditionally, PhD students have normally been based on the same campus as the main supervisor, although second and third supervisors might be located on a different campus, or even in a different university. Increasingly, however, the use of digital communications, the internet, online library resources, and

more flexible ways of work and study, have liberated the PhD study out of the cloisters and into the digital world of distributed education. There are a lot of tools and techniques to encourage and support tuition and the supervision of PhD research at a distance, and we would like to draw attention to these as we explore the experiences of the PhD student and the roles of the PhD supervisor in a digital environment. Like all tools and techniques, the suggestions made are just suggestions, there is no compulsion to rush out and adopt them uncritically. In addition, the usual caveat applies when discussing digital resources, in that this is a very fast-changing subject area, so software applications and services rise in popularity and disappear without trace; they are improved, superseded, and adapted to suit other purposes. So, much like the PhD process itself, their use is a voyage of discovery and transformation that can lead to new ways of thinking about old problems.



## **Supervision at a distance**

Increasingly, services which we used to consider could only be delivered face-to-face, are being offered through online media. The supervision of research students is no exception to this trend, and although there is a belief among some supervisors that the PhD student needs to be ‘just along the corridor’ from the supervisors, really this is more for the comfort of the supervisor than the student! In fact, with some aspects of the work of postgraduate research students, there is an argument that the student can get more attention, and perhaps better attention, by combining face-to-face with online opportunities. In our work, a recurrent question is, ‘How can I do this activity with a student who is at a distance’? In some cases, it might simply be making use of video-conferencing software (for which there is an increasing diversity of sophisticated software available) to have an in-depth discussion; in other instances the student can be referred to a host of useful online resources to enhance their skills and knowledge.

In our experience, almost every instance of thinking through the issue of how a face-to-face educational experience can be moved (at least partially) online, means that the re-thinking process strengthens the pedagogy and the educational rationale. In part, this may be because we are fundamentally re-thinking what is really essential in the educational activity itself (as opposed to how the 'lesson' we deliver has evolved away from what we initially started with). On the other hand, experience tells us that there is more than one way of learning/teaching a subject, so adding various online educational resources might be considered simply extending the tool-kit that we have at our disposal, and that we are prepared to share with the student.

A helpful online resource when getting started on a PhD is <http://www.findaphd.com> as this combines a number of useful resources and networks. Obviously, it can be used to find a PhD position which the prospective student might consider applying for, but the resource goes way beyond this. Details of funding opportunities and different types of PhD offers can be viewed and compared. There are

sections on the ‘nuts and bolts’ of what constitutes a PhD, as well as advice on how to cope with the most common difficulties, and suggestions of help from a variety of sources – including other PhD students. An interested surfer can browse through the PhD opportunities that are currently on offer, compare the details, and even contact the proposed supervisors in a variety of countries for more information on their research proposal. Most importantly, the surfer can access this information at their own convenience rather than travelling for an hour to ask a question that requires a three-minute answer. For these reasons, we make a point of investigating new online opportunities for each teaching and research activity that crosses our paths.

<http://www.findaphd.com> is a freely available, open-access site, and you can register to get regular updates emailed to you. On the site, you can search for various topics and guidance suggestions, such as ‘working with a supervisor’, ‘what to expect’ and ‘preparing for study’. The supporting text has short articles on a wide range of issues such as what is meant by ‘critical thinking’, how to select and justify

your research methods, and tips on how to organise and present your research so that other people can appreciate your work.

Like all of these sites, this one will not answer all of your questions, but it does contain different perspectives and useful information from people who have a lot of experience. When you are just starting out on your PhD research, not all of this advice will seem equally relevant. It makes good sense, however, to familiarise yourself with the variety of information on the site, and to bookmark the URL, because you might want to return to these topics later in your studies as these issues take on a new relevance. This advice also applies to the supervisor, because you might wish to direct your student to read the advice which will reinforce (or give a different perspective to) guidance that you give to students in tutorial sessions.

## **The suitability of the research student**

What sort of person makes the best PhD student? What characteristics and attributes should a supervisor look for? Fortunately there is no blueprint that needs to be rigorously

imposed. Each and every student is different, but there are some common attributes. Obviously, every supervisor hopes for the perfect student, who will be meticulous, self-motivated, well-disciplined, and a competent all-rounder! The reality is that most students who make it as far as being registered for a research degree will have all of these attributes in some measure... and they all bring their own challenges. Student levels of confidence, competence and performance will vary throughout their period of study, and part of the job of a supervisor is to moderate, encourage, and develop these competencies, and perhaps to add a few more skills as the need occurs. The journey of the PhD research student is essentially and fundamentally a voyage of transformation. The person who successfully completes a PhD is really a different person from the one who began; more confident, more skilled, and more competent, with a fundamentally changed outlook on their own professional abilities.

In the old days, it was felt that the only way the student could acquire this change of state was for the student to inhabit the same environment as the professor. Not in the

same room, of course, but certainly living within shouting distance. What really intrigues us in contemporary academia, is the ability to utilise a wide range of digital technology to narrow the conceptual distance between a supervisor on campus and a research student at a distance. We frequently take for granted the diversity and sophistication of the digital technology within our easy reach. From 'simple' email and Skype, to more complex social media, screen-sharing, and file-sharing protocols, there are lots of digital tools that, while they have not been specifically designed for academics, are amply suited, with perhaps minor adaptations, to the intimate world of research student supervision.

According to the stereotype, traditionally, one, or perhaps two, academics would get together to think about a burning research question that interested them. They would then seek funding to cover the costs of employing a student, meet the needs for associated costs such as tuition fees, library and IT resources, possibly travel and equipment for field work, and so on. Then they would advertise, interview, and appoint a research student, who would come to work

full-time under their instruction, usually for around three years, until the student completed writing up and defending a research thesis that (usually) generally supported and was an extension of the life-work of the main supervisor.

This is still a common model, but fortunately the flexibility and innovation that has evolved at all levels of progressive education, has resulted in a wide range of new study options. It is increasingly frequent for research students to be self-funded, (or part-funded by an employer) and studying part-time. These students will normally be working as fees and other bills have to be paid, and they may also have family responsibilities such as the care of young children or elderly parents, that would make full-time study impossible. On the other hand, what they lose from the energy and momentum of working full-time on an absorbing research project can be made up for by the increased time-span for reading, cogitation, and gathering data.

There are two key considerations that apply to any student, whatever their mode of study, and it is imperative that the supervisory team make these clear from the outset. Firstly,

it needs to be understood and emphasised, by both student and staff, that the research project belongs to the student; and only the student can make a success of this. The supervisors should provide initial direction, and will offer constant advice and reinforcement throughout the period of study, but the important decisions – for better or worse – need to be made by the student. It is the student who will need to advocate and defend the thesis, and who will reap the rewards.

Secondly, the supervisors need to provide an appropriate induction for the new student as soon as they start working. No matter how smart and self-confident a new student might be, it is wrong to assume that they will just ‘pick things up’ as they go along. Whether it is the simple matter of making introductions to co-workers, or the more complex business of learning specific research methods and IT technical skills, a common-sense approach dictates that the supervisors should assume a zero baseline of experience until proven otherwise. Research has clearly shown the benefits of a good induction for students starting on undergraduate courses, and it makes no sense to assume



that it would be otherwise for postgraduate research students. In fact, it is very likely that the research students will soon begin to overtake the supervisors, perhaps in the details of their specific research methodology, their awareness of just-published journal articles, or their adoption and use of new digital applications such as social media services. This is to be encouraged.

For these reasons, it makes sense to have an online, or at least a digital and accessible, version of the required skill-set and supporting resources that will be issued to research students at their induction. No matter how good your memory is, or how copious your note-taking, there are a lot of new things to remember and the new research student is unlikely to remember them all accurately. Nor do they need to. An online repository of relevant information, either on the institutional intranet, or on the open internet, immediately allows users different levels of access. Slow learners can reread and re-visit the information at a later date; all learners can visit the information for revision, or when the need-to-know becomes necessary. Fast learners and those who have specialised needs can delve into layers of

additional information – the extras that are nice-to-know in greater depth but cannot normally be covered in generalised induction sessions.

Another important point in favour of compiling a suite of resources online is that the very act of being required to think through in advance all the possible situations and resources that might be needed by the research students, tends to mean that a really comprehensive resource can be built up. The need to prepare in advance for an asynchronous reader at a geographically distant location, rather than photocopying last minute, ad hoc guidance to be handed out in a classroom, usually results in a better designed set of resources. Of course, an additional beauty is that these resources can be updated easily and they are available 24-7, unlike any supervisor that we know!

## **Enjoy the process!**

One of the very first things that we say to a new PhD student is that they need to have fun! This is not quite as counter-intuitive as it might at first seem. Usually we say first that actually stamina is at least as important as intelligence in

completing a doctorate by research. We have known several very clever people who, for one reason or another, could not manage to finish the PhD that they started. This is not as surprising as it might appear, because a PhD is, almost by definition, a hard thing to complete. If you do not have the staying power when the going gets tough, the temptation to throw-in the towel and go off to do something more interesting with your life, becomes very enticing. This is why the student (and the supervisor!) needs to really enjoy the subject that they are studying in great depth. When data and competing concepts get confusing and complicated (as they inevitably will) it is worth a lot to be able to enjoy the difficulties of the subject, even to relish them. If the topic surrounding your research question does not make you want to really absorb yourself in the fun of finding out more, then you are probably doing the wrong job.

A regular 'safety-valve' is helpful, whether this is a change of task – (such as a spell of fieldwork) or a routine that allows a healthy balance between reading, writing, sport, family, and socialising with friends. The contented student

should be able to take a short break and return to the academic battle the next day with just as much (or more) enthusiasm as when they first started. At sporadic intervals We like to send our research students a link to a funny story, or a cartoon, such as can be found at [www.phdcomics.com](http://www.phdcomics.com) to poke fun at some aspect of the PhD research process. This website has hundreds of cartoons on almost every aspect of the PhD experience, and some of them ring so true that they are almost painfully funny. It certainly helps if we can laugh at ourselves and see things in perspective, but by far the best solution is to spend a lot of initial thinking-time considering exactly what is the best wording of the research question (and sub-questions) so that at the end of the studies both student and supervisor can honestly say that, whatever else, they had a lot of fun in the process!

## **The main research supervisor**

In the course of a normal year, we frequently help to organise introductory training sessions for new research students and for lecturers who are just starting out to supervise research students for a PhD. Naturally, one of the

issues that we address is to consider what makes a good supervisor. This is both very simple and quite intangible. The simple version is that the good supervisor guides, advises, and supports the research student through the entire process – from the first tentative steps, to the final success at the viva and subsequent graduation. This seems rather obvious, and it is fair to ask for a more detailed breakdown of the roles of a research supervisor, and this is where it gets a bit more complex. Firstly, there are two main roles for a supervisor – the Director of Studies, and the Second (or Third) supervisor. Let's deal with the main supervisor first.

The Director of Studies (or lead supervisor) is normally the most senior of the supervisors, though this is not always the case. The main supervisor will be responsible for the week-by-week guidance of the research student, although the frequency and extent of contact time will vary widely for different students and subject areas. This supervisor will be the main link between the student and university administration, possibly a Graduate School or similar research management section. There will be regular

progress-monitoring reports to complete (perhaps six-monthly), and those will normally be based upon regular formal meetings with the student to discuss the progress of the research. In addition, there will probably be lots of intervening meetings, of both short and long duration, as the supervisor responds to questions from the student, suggests tasks to perform, or recommends reading to enhance some area of knowledge that the student might benefit from. Some of these meetings might be quick, ad hoc conversations in the corridor or the café, while others will be formal reviews between the student and the whole supervisory team.

Normally the only professional requirements are that a) the supervisor has a PhD already; b) that they have some area of expertise in the subject area that they are proposing to supervise; and c) that they are attached to an academic institution. Frequently, (although this is not always the case) the main supervisor is required by the university to have successfully supervised at least two PhD students to completion, usually undertaken in the more junior position of Second or Third supervisor. In certain circumstances, a

non-academic expert may also be appointed as an Advisor, rather than a supervisor, if this person has some relevant specialist skills or knowledge, for instance an important industrial contact.

Like all walks of life, some Directors of Study are more diligent than others, and have greater or lesser social skills and leadership qualities, but basically they all have a vested interest in assisting the student to complete their PhD. Usually the supervisors share a common enthusiasm for the research topic with the student, and this can help to co-create the voyage of discovery. Even with the best supervisor, it would be foolish to expect them to know the answers to everything, but hopefully their level of experience should be able to suggest a logical way to discover these answers. We like to give detailed (line by line) feedback on the first pieces of academic writing from the student, so that some guidance on the style and standards of academic writing, the level of detail, and the quality of the text can be established, but some supervisors may take a less hands-on approach. We consider that our role is to help the student to understand and deal with the

academic challenges that they face during the research project, but it is also to guide and offer advice on how they might tackle these challenges, to provide some scaffolding to support, but not to do the work for them.

## **The Second (or Third) supervisor**

Although the main research supervisor normally has the most contact with a research student, the role of the Second supervisor can also provide a useful balance in that relationship. Normally the second (and perhaps a third) supervisor has limited contact with the student, perhaps as little as three or four formal discussions per year, but the input they can provide is also valuable. It might be because the two supervisors cover different aspects of the same research problem and so can give different suggestions to cope with problems faced, or they may favour slightly different research methods or emphasis in the investigation. Even when the advice is similar from both supervisors, it can provide a useful triangulation to reassure the student that they are on the right (or the wrong!) track. Educational research has indicated that the way that we supervise



research students is often heavily influenced by the manner in which we ourselves were supervised at the same stage. Some supervisors prefer a distant role, only making contact through formal meetings to check that the research is progressing well. They expect their research students to be independent-minded and self-motivated and see a supervisor's role as a combination of safety-net (for consultation in times of trouble) and manager (ensuring that all the key stages of development and reporting are taken care of).

At the other end of the spectrum there are supervisors who seek to micromanage the PhD project. Resist this temptation! Although the supervisor has a strong self-interest in ensuring that the student's research project is successfully completed, the work needs to be done by the student, including making the mistakes, false starts, and the hours of working out the best way(s) forward. The relatively light touch provided by the second supervisor can easily be provided via Skype or other such distance-shrinking audio-visual technology. If it is done on a regular basis, perhaps with some periodic face-to-face meetings, this can also be

an option for the main supervisor. A benefit of this is that the supervisory team can be brought together on the basis of the skills and enthusiasm that they provide, not simply because they happen to be co-located in the same building or campus. Gone are the days when a PhD student needs to be based just along the corridor from their main supervisor – and anyway, many research students who were residentially based near their supervisor’s office will tell you that their supervisor was so busy globe-trotting to conferences and fieldwork that they hardly saw them for months at a time. Although the UK universities insist upon an external PhD examiner from a different university to ensure the equivalence of the level of the degree, it’s a pity that there is so much emphasis attached to supervision by single institutions as this would seem to be a great opportunity to bring together cross-institutional expertise at the supervision stage, as well as at the final viva voce.

## **Using videoconferences for research supervision**

Over the past few years we have been experimenting with the use of videoconferencing for conducting tutorial discussions with PhD students (and also for an occasional viva). There are several reasons for this. Firstly, in a geographically distributed institution like the University of the Highlands and Islands, we are not all located in the same building, or even the same part of the country. The catchment area of the 'local' university covers a geographical area bigger than a small country. Both staff and students who are participating in a tutorial or seminar might be participating from widely dispersed locations and may rarely meet face-to-face. It used to be a presumption in most universities that the research student would be based in a room just along the corridor, or somewhere convenient within the department, convenient that is for the main supervisor. With the increasing number of part-time research students and the benefits of communications technology, we would argue that this is no longer necessary, and possibly no longer even desirable.

The advantages of using videoconferencing are several, whether it is the high-definition system which is available at the UHI, or the quick-and-easy software connections for less formal meetings. Services such as Skype and Facetime are in common public use, and similar techniques can be extended into non-work activities. (Normally institutions such as universities and health trusts prefer dedicated software that provides secure access, rather than open solutions, but the process is generally similar). Firstly, although it is not always imperative to see the person to whom you are talking, the ability to see facial cues does give an extra quality that is not available in simple telephone conversations. In the same way that co-location in the same room allows speakers to see the body-language of their audience, the video presence enables participants to see their colleagues smile, nod their head in agreement, or simply watch their eyes glaze over! We have found this very useful to observe if viewers actually realise when a joke is being made!

Secondly, probably the most convenient advantage of vc (videoconferencing) is the ability to connect people from

almost anywhere. A regular meeting between the main supervisor and the research student at a distant location can be joined by another supervisor at a third location. This provides the best opportunities for networked support, regardless of where the expertise is based. Meetings can be a highly structured discussion with a formal agenda, or a quick, ten-minute focus on a specific point of deliberation. The participants can join from home, or work, or even from the middle of fieldwork, and the media is sufficiently simple and easy-to-use that even short, ad hoc meetings to discuss the wording of a single paragraph, can be arranged at the drop of a hat.

Thirdly, most video communications services have the ability to record the meeting. This is probably not going to be used on every occasion, but for key presentations, or for intense sessions of very complex discussions, the participants have the advantage of being able to replay the meeting, analyse the dialogue, and take notes at their convenience.

In many institutions, whatever the official rhetoric, the contact time between the research students and the main supervisors can be sparing, not to say sporadic. The ability to video-link with the supervision team at prearranged times, wherever they are in the world, is a great tool to give meaningful and networked support to the research student, and to provide quality time when it is most needed.

### **Whose project is it anyway?**

One of the very first things that we say to a new PhD student, and we repeat this on several future occasions just to make sure that the point is well made, is that this research study is their project, not ours. This might seem obvious, but there are good reasons for reinforcing this responsibility early in the research student-supervisor partnership. It is to be expected that any supervisor has a vested interest in getting their student(s) successfully through the PhD process. By definition, the research topic that the student becomes immersed in is of common interest to the supervisor(s), who may already have spent many years of their lives researching similar or allied topics.

In addition, supervising successfully a number of research students to gain their doctorates is looked upon as a merit-worthy academic enterprise, and success in supervising should reflect well on the career aspirations of the supervisor. Finally, there may be other benefits, such as new ideas, new ways of thinking and the 'original contribution towards knowledge' of the research topic which, by definition is the mark of the PhD. This should also stimulate, inspire, and breathe fresh life into the academic thinking of the supervisor(s). So, all round, there are lots of justifiable reasons why it is in the supervisor's best interests that the research student (whom the supervisor presumably had a say in appointing) is bright, vibrant, innovative, and successful in the completion of their PhD.

There are limits, however. Although the supervisor wants the research student to write well, they will not write the dissertation for the student. The supervisor can recommend, guide, discourage one activity and encourage another, however when the student walks into the final viva to defend their thesis, they must be able argue their own case and justify their own decisions and conclusions. Some

supervisors may get too close to the student's research topic, resulting in a wish to influence it, or steer it very firmly in a different direction, and up to a point this is natural. One student associate eventually parted company with his supervisor because the new research evidence of the student was indicating that it was beginning to undermine the views held by the supervisor over a long career. Rather than embracing the change, the supervisor sought to influence a different interpretation; the research student resisted, and was awarded his PhD in due course.

Our job as supervisors, with every student, is to listen to their thoughts on the research topic, make suggestions, discuss the latest academic reading, bounce ideas off, encourage experimentation and exploratory thinking, encourage them to write down their ideas and their results, and to work together as a team to analyse what these results actually mean. We give feedback verbally, and in a written form, and while we expect the student to listen to what is said, we do not expect them to necessarily agree with everything. The final decision on what to include and what to omit from the dissertation, on how many samples or



how many interviews are needed, must be the decision of the research student. It is the students who will need to defend their decisions to the academy, not us.

The path of study for a PhD is much more about learning the process of research and hoping at the conclusion there will be some good results which might make a difference. Above all the role of a good supervisor is to help the research student learn the rules and tools of the trade, and to be supportive in that process – even if that support requires some rather blunt advice which the student does not initially welcome and means that more hard work is required!