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A handbook for students and their supervisors

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>
> Social Research Association

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Dr Estelle M. Phillips is an independent educational consultant. She specializes in giving advice on appropriate provision for research students, and in conducting training for doctoral students and supervisors.

Professor Derek S. Pugh is Emeritus Professor of International Management of the Open University Business School. He has considerable experience in the design of doctoral programmes and the successful supervision of PhD students.

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FOURTH EDITION
Worldwide Bestseller

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A handbook for students and their supervisors

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So you will not be traversing a set course laid out by others. You will be expected to initiate discussions, ask for the help that you need, argue about what you should be learning, and so on. You are under self-management, so it is no use sitting around waiting for somebody to tell you what to do next or, worse, complaining that nobody is telling you what to do next; in the postgraduate world these are opportunities, not deficiencies.

The overall university framework for research students ensures that there is a basic similarity for all doctoral candidates as they progress through their studies. But there are also some notable differences between the research cultures of university disciplines, particularly between the culture of the laboratory-based sciences and that of the humanities and social sciences. To a considerable extent they stem from the large capital investment in equipment and materials required in scientific research.

Supervisors in science have to take the lead in obtaining the physical resources and the research personnel required. A studentship may be allocated and a doctoral student recruited specifically to work on a designated line of research. In this situation the 'apprenticeship' aspect of being a doctoral student is emphasized. The student's research topic will be clearly defined to fit in with the innovative thrust of the supervisor's research programme, and this will set limits to the level of research creativity that can be shown. The student will be required to do 'dogsbody' work in the laboratory or on the computer as part of professional training. In these situations there develops what might be called a 'joint ownership' of the doctoral research between supervisors and the students. Supervisors will have a strong interest in getting the research work done and using the results obtained. Joint papers will be the norm. The danger to watch for in this culture is the exploitation of the student, leading to the feeling of being just an extra pair of hands for the supervisors' research. It must be remembered that there has to be a sufficient amount of autonomy for the student to be able to make an original contribution. It is this which justifies the award of the PhD degree.

In contrast, in the humanities and the social sciences students often come with their own topics within the field in which the supervisor is expert, and academics give a service of research supervision. Being busy people, supervisors often have to ration the amount of attention they can give. Research supervision has to compete with the supervisor's own current research (which can be considerably different), undergraduate teaching and administration. Supervisors will have only a general interest in the results of the student's research, and will act more as role models than as apprentice-masters. The danger to watch for in this culture is the neglect of the student for long periods of weeks, months, even years. It must be remembered that students need the regular support of supervisors if they are to develop sufficiently to achieve the PhD degree.

2 You will experience periods of self-doubt which you must come through with the clear aim of becoming a competent professional researcher.
3 Read this book for insights into the PhD research learning process, to help you manage it better.

too strongly that you should discuss this relationship at the very earliest opportunity, and a tentative agreement about working together should be reached.

■ Starting out as a research student

In general, universities put very limited efforts into induction procedures for newcomers into the higher degree system or into the role of research student. Those who have recently attained a high-quality first degree share with their peers who have returned to university after some years of working the confusion and disorientation that comes from not quite knowing what is expected of them.

Often new research students have the idea that people who possess a PhD degree are outstandingly brilliant. This idea inhibits their own development as they are equally sure that they are not outstandingly brilliant, and therefore cannot really expect to be awarded a PhD. Similarly, if they actually read any completed theses (this is not the norm and will be discussed in detail later) they often emerge convinced that they would never be able to write anything even remotely resembling such a document either in length or quality.

The world that the new research student enters, classically portrayed as an 'ill-defined limbo' (Watson, 1994), involves making a traumatic intellectual transition. It also involves the phenomenon of 'unlearning existing expertise' and having to start from the very beginning in order to discover slowly what one is supposed to be doing. During this period students might question the whole point of their being in the university.

You should, therefore, make every effort to mitigate these unpleasant beginnings by agreeing a small initial project with definite deadlines at an early interview with your supervisor. The agreement should include the understanding that, once the work has been completed, you will discuss with your supervisor both the work itself and your feelings about it. This exercise will help to clarify any doubts about your ability to undertake research and written work. It will also help to reveal the evolutionary process (corrections, drafts, rewritings, etc.) inevitably involved in the production of theses, articles and books to publication standard which you have just read with such admiration.

It is also a good idea to talk to other research students about their experience of the role as well as their work. Sharing apprehensions helps to resolve them through the knowledge that the problem is not an individual one, but one that is inbuilt into a less than perfect system. There are indeed guidelines which universities are advised to follow in providing support for their doctoral students. Your student representative can help you in accessing these should it ever be necessary.

3

THE NATURE OF THE PhD QUALIFICATION

In this chapter we shall discuss the nature of a PhD. We shall consider the objectives of the process, the part that it plays in the academic system, and the inevitably different aims the students, the supervisors and the examiners bring to it.

The meaning of a doctorate

We are going to start with some historical background and present in a schematic way the meaning of the degree structure of a British university.

- A bachelor's degree traditionally meant that the recipient had obtained a general education (specializing at this level is a relatively recent nineteenth-century development).
- A master's degree is a licence to practise. Originally this meant to practise theology, that is, to take a living in the Church, but now there are master's degrees across a whole range of disciplines: business administration, soil biology, computing, applied linguistics and so on. The degree marks the possession of advanced knowledge in a specialist field.
- A doctor's degree historically was a licence to teach – meaning to teach in a university as a member of a faculty. Nowadays this does not mean that becoming a lecturer is the only reason for taking a doctorate, since the degree has much wider career connotations outside academia and many of those with doctorates do not have academic teaching posts. The concept stems, though, from the need for a faculty member to be

There are other career reasons for wanting to take a doctorate. Some students find that they are being called 'Dr' by people coming in to the laboratory or hospital department where they work and feel guilty at accepting the title they have not yet achieved. Others feel that relationships with their medical colleagues may be easier if they too have the title. Some are embarrassed at being alone in their academic group without a title and succumb to their feelings of peer pressure in order to conform.

Another reason for undertaking a research degree after doing well at undergraduate level is simply taking up the offer of a studentship as a form of employment and without having any real career aims. All of these motives are far removed from the idealistic view of the PhD student as somebody dedicated to advancing knowledge and potentially worthy of becoming an undisputed expert in a given field.

These diverse aims of students do not remain the same throughout the period of registration for the higher degree, however, not even for those students who *do* start because of the intrinsic satisfaction of actually doing research and because of their interest in the work for its own sake. The following description of his decision to work for the PhD was given by Bradley, who was studying in the English department of a university:

> I couldn't think of a more fulfilling or pleasurable way of spending my time. It's almost instinctive. I haven't weighed up the pros and cons, it was an emotional decision really.

As we discuss fully in Chapter 7 on the PhD process, all these students, together with very many more enthusiastic new recruits, change their way of talking about their PhD as the years of learning to do research and become a full professional pass by. Towards the end their aims become narrower: simply to reach the goal of the PhD – 'got to get it' – or else to complete an unfinished task – 'must finish'.

It is important that research students eventually realize that it is determination and application, rather than brilliance, that are needed. The sooner you learn this the better. Conducting a piece of research to a successful conclusion is a job of work that has to be done just like any other job of work. Also, just like any other job of work, an important objective should be to make a success of what you have set out to do.

■ Aims of supervisors

In the same way that students begin a PhD for a variety of different reasons, so too supervisors undertake supervision with different aims in mind. There are those who wish to add to their reputation for having a large number of successful research students of high calibre. With each additional success their own professional status is raised. Of course, the

converse is also true: it is possible for academics to go down in the estimation of their peers by having a succession of students who drop out, do work of poor quality or take an exceptional amount of time to complete their theses. But those supervisors who have one or more ex-research students who are now professors speak of the achievements of these graduates as though they were their own.

There are at least two kinds of supervisor. Some supervisors believe that postgraduates should be encouraged to become autonomous researchers. Others believe they should be encouraged to become extremely efficient research assistants. Some supervisors have not really thought about this matter specifically but nevertheless treat their research students in such a way that it is relatively simple to deduce which implicit theory of doctoral education and training they hold.

Some supervisors are dedicated to developing their favoured area of research by having several people exploring different, but related, problems. These people aim to build centres of excellence around themselves, which will attract visiting academics from other universities and other countries. In this way they are able to spend some time discussing their work with other specialists. They may also be able to arrange an occasional seminar given by a well-known expert. Students of these academics are likely to find that they are given small, well-defined problems that closely border the research problems being pursued by other researchers attached to their supervisor.

There are also those few senior academics who aim to become eligible for a Nobel prize or other senior honour. What this means for their students is that they will be treated as research assistants and expected to do the work set out for them by the professor, in the limited manner of a subordinate.

As well as those who wish to get the work done as speedily and efficiently as possible, there are those supervisors who are genuinely interested in producing more and better researchers. They are prepared to offer a service of supervision to research students in the same way as they offer a service of teaching to undergraduate students. What this means for students is that they will be expected to develop their own topics for research and to operate in a more individual manner. This approach gives more autonomy but entails a more restricted academic peer group.

Thus supervisors have many different reasons for agreeing to add to work already being undertaken by engaging in the supervision of research students. Not all of these aims are mutually exclusive. It is necessary, however, for students to discover which approach a prospective supervisor favours in order to evaluate the implications for what will be expected of them.

It is also important for incoming doctoral students to be clear whether they wish to become autonomous researchers or superior research

the craft of doing research in an environment that gives you some degree of protection by the established nature of much of the ideas, arguments, measuring equipment, etc. A degree of protection in the environment is the best situation for efficient learning: being thrown in at the deep end is all very heroic but it does tend to induce a phenomenon known as drowning!

Of course, you will have to make your original contribution – merely replicating what others have done is not adequate. So, for example, you will have to use a methodology on a new topic where it has not been applied before and therefore make manifest its strengths in giving new knowledge and theoretical insights. Or you will have to apply two competing theories to a new situation to see which is more powerful, or design a crucial experiment to produce evidence to choose between them. As a result you may produce your own innovative variant of the methodology or theory. There will always be an appropriate element of exploratory work and you may well solve some useful discipline-based problems on the way. Testing out is the basic ongoing professional task of academic research, and doctoral work done well in this framework is much more likely to be useful, and thus publishable and quotable.

On the other hand, the idea of tackling an exploratory topic which has little by way of conceptual frameworks seems very attractive. Potential employers give considerable weight to the 'real world applicability' of the research undertaken by PhDs and an Australian survey by Phillips and Zuber-Skerritt (1993) showed. It is also an approach that the British Government now wishes to encourage. There is no denying the appeal of tackling such topics, but you should be aware that the risks of failure are much greater. If you have a lot of confidence, stemming, say, from a great deal of practical experience and very strong support from your supervisor (who will inevitably be called upon to make a larger input) you might consider work in the exploratory or problem-solving approaches, but these are undoubtedly less structured and therefore professionally more advanced activities. Most students should be considering whether they can run before they can walk. If you are going to tackle a real-world problem, it may be that the more structured and limited project of a professional doctorate might be more appropriate for you (see pp. 196ff).

It is also fair to point out that even if you obtain a PhD for work that is completely exploratory or problem-solving, which is less likely anyway, there will almost inevitably be a considerable element of giving credit for a 'brave try' (examiners being kind people who look for ways of passing students). So in these circumstances it is less likely that your work will make sufficient impact to be publishable and quotable than if you do well in the testing-out approach. It will then serve you less well as a base on which to build a research career. It is a wise student who decides to

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THE FORM OF A PhD THESIS

Three of the key ways of not getting a PhD that we discussed in Chapter 4 involved either the student or the supervisor (or both) not understanding the nature of a PhD degree. This demonstration that you are a full professional requires the exercise of the craft of doing research, as discussed in Chapter 5, in such a way as to satisfy the examiners (i.e. your senior professional peers) that you are in full command of your academic field.

This you do by 'making a contribution to knowledge'. This sounds both very impressive and extremely vague, and is therefore worrying to students. In this chapter we shall examine what form of a PhD thesis will satisfy these requirements.

Understanding the PhD form

Once again we must start by explaining that, as with the nature of a PhD, it is not possible to spell out administratively or bureaucratically what is required – that is not the nature of the process. The university regulations for a doctorate, for example, have to apply in all subject fields from Arabic to zoology. So they are inevitably formal and are not able to catch the particular requirements in your field at this time. Indeed the aim of the training process is precisely to put you in a position where you can evaluate what is required, in addition to being capable of carrying it out.

There is, however, a certain *form* to doctoral theses – clearly at a high level of abstraction, since it has to be independent of the content and apply to all fields of knowledge. We may think of the analogy of the sonata form in music. This is a structure of musical writing, but it tells you

nothing about the content. Haydn wrote in sonata form, but so did Lennon and McCartney. The range of content covered is therefore enormous *but* the sonata form does not cover all music. Neither Debussy nor Britten used this form. In jazz Scott Joplin used sonata form but Bix Beiderbecke did not. The same is the case with the PhD. It has a particular form and since not all research conforms to it, you have to be aware of what the elements of its form are.

There are four elements to PhD form that we have to consider: background theory; focal theory; data theory; and contribution. These analytical constructs run throughout the thesis and do not have to correspond directly with the chapter headings used. They have to be covered in the thesis as a whole, however, as they are the headings under which its worth is evaluated.

■ Background theory

This is the field of study within which you are working and which you must know well, that is to full professional standard. So you must be aware of the present state of the art, what developments, controversies, breakthroughs are currently exciting or engaging the leading practitioners and thus pushing forward thinking in the subject.

The standard way of demonstrating this is through a literature review. Remember that you are not doing a literature review for its own sake; you are doing it in order to demonstrate that you have a fully professional grasp of the background theory to your subject. 'Professional' means, as we saw in Chapter 3, that you have something to say about your field that your fellow professionals would want to listen to. So organizing the material in an interesting and useful way, evaluating the contributions of others (and justifying the criticisms, of course), identifying trends in research activity, defining areas of theoretical and empirical weakness, are all key activities by which you would demonstrate that you had a professional command of the background theory.

It is important to emphasize that a mere encyclopaedic listing in which all the titles were presented with only a description of each work and no reasoned organization and evaluation would not be adequate. It would not demonstrate the professional judgement that is required of a PhD. It would be the equivalent of your taking a driving test and driving at no more than 20 mph throughout. Even if you made no mistakes during the test, you would fail because you had not demonstrated sufficient confidence and competence to be in charge of a vehicle. As a PhD, you must similarly be confidently and competently in charge of your understanding of background theory, and you have to demonstrate this through the literature review.

■ Action summary

1. Ensure that the four elements of the PhD form (background theory, focal theory, data theory, contribution) are adequately covered in your thesis.
2. Do not make your thesis (that is, the report) any longer than it needs to be to sustain your thesis (your argument).
3. Remember that you need only take a very small step indeed with regard to the 'original' part of your work.
4. Discuss with your supervisor the many different ways in which a thesis may be presumed to be 'original' and come to some agreement about the way that you will be interpreting this requirement.
5. Write your thesis in readable English, using technical terms as appropriate but avoiding jargon.
6. From the beginning, use the footnoting and referencing conventions of your discipline.
7. Take every opportunity to write reports, draft papers, criticisms of others' work, etc., during the course of your research. Do not think that all the writing can be done at the end. If you do avoid writing you will not develop the skills to write efficiently, or even adequately, for your thesis.
8. Write up your final thesis in the order which is easiest for you. It does not have to be written in the order in which it will be read. The method section is often a good place to start.

viscometer that he would be using. In order to do this he had to read the literature on viscosity to see how such calibration had been done previously. Once he started to read, he realized that there was a confusion in the literature, which had to be sorted out. In order to do this he had to check the calculations reported in the journals; this involved engaging the help of a mathematician. Therefore, his overall plan could more accurately be described as: 'to find the shape of the molecule in solution by making measurements with a viscometer, calibrated according to verified equations'. This more sharply defined overall plan was gradually formulated as Ewan thought about what he had to do and began the work.

This situation is not unusual. New research students enter the system with a vague overall plan that will get them to their long-term goal of a PhD at the end of three to four years. Their short-term goals may be more clearly defined: starting work on the problem, discussing what they want to do with their supervisors and gaining access to equipment or samples. Beyond that, however, goals are very fuzzy indeed. This is because there is a tendency to take an unstructured approach to the project regardless of the time constraints and interim tasks to be undertaken and completed.

At first three years (or six years part-time equivalent) will appear to be an extraordinarily long time for completing a single piece of research. Beware of this illusion. If you trust it and behave accordingly, you will be in very deep trouble later on. A postgraduate in biochemistry learned this the hard way. At the end of her second year of research into anti-cancer drugs, Diana said:

> I'm aware that I've only a year left and two years have already gone. Three years doesn't seem half long enough; it seemed a long time in the beginning. Now I'm trying to finish off groups of experiments and say 'that's the answer' rather than exploring it more fully, which is what I used to do.

The importance of not losing sight of the time constraints on each part of your project is clear.

It is useful to look on the total process as a series of tasks which lead to the *progressive reduction of uncertainty*. As we saw in Chapter 6, there is a form to a PhD that structures the overall amount of work to be undertaken. This form generates a series of stages that have to be gone through. These stages, in turn, will point to a series of tasks that you will have to do. Going from 'form' to 'stages' to 'tasks' in planning what needs to be done becomes more and more specific to the individual research project and is an important part of your interaction with your supervisor (see Chapters 8 and 11). In principle, as you carry out each of the tasks that comprise the stages you should be reducing the uncertainty involved in your thesis. So you start with a wide field of possible topics and end, after some years of work, with the very specific report of your particular PhD research.

are less frequent and need to be prepared for on both sides. Usually supervisors expect to meet with their research students every four to six weeks. It is a good idea to discuss the frequency of meetings when you first agree the kind of student–supervisor relationship you are going to have. We have already considered (in Chapter 2) the advantages and disadvantages of more and less frequent meetings, so you will realize the importance of ensuring that a principle is established that is satisfactory for both your own and your supervisor's way of working.

Your supervisor has to fit tutorial meetings with you (and other postgraduates) into what is probably an already full work schedule. In order to be of most use to you, your supervisor will have had to spend some time prior to the meeting thinking about you, your research and any problems connected with it, reading anything that you have written and preparing a focus point for the tutorial. In order for you to get the best out of your supervisor it is essential that you allow ample time between setting up the meeting and the actual date. It is a good strategy to agree dates for the next tutorial during the course of the previous one. It is also important that you do in fact turn up at the appointed time and date. If you are late it produces additional difficulties for the meeting. Either it will be cut short or your supervisor will be worrying about work that should be attended to but is being neglected because of the time given to you. If you cancel a meeting at short notice, the time and thought that your supervisor has already invested in it is wasted or does it augur well for your future relationship or the seriousness with which future meetings will be treated.

A very important part of managing your supervisor is to set a good example. If you find that your supervisor is not as exemplary as the above model suggests, you can provide encouragement by behaving in an exemplary way yourself. By doing so you demonstrate that you expect tutorials to be well prepared and treated with equal respect on both sides. You may even wish to phone or email a day or two before the planned meeting to confirm with your supervisor that everything is in order for it and to ask whether there is anything else you should be thinking about or preparing that may not have been mentioned previously. At the end of the tutorial, be sure that both you and your supervisor have noted in writing what has been agreed as the next stage of the work.

Supervisors expect their research students to be honest when reporting on their progress

Supervisors are not idiots – at least, not many of them – and they are not fooled by absent students who leave messages saying that everything is fine and they will soon be needing a meeting or sending in a written draft. Neither are they taken in by the student who does put in an appearance from time to time, talks volumes about work in hand, new ideas and the

other things. You have to establish exactly what it is that is being criticized and what you can do about it to put it right. You may need to omit the section completely, or move it to another part of the report, or rewrite it, or rethink it before rewriting it. You must help your supervisor to express clearly, and with as much information as possible, what it is that is wrong. Once you have the information, you will be in a position to do something about it. You might want to discuss it further, and perhaps disagree; or persuade your supervisor of the correctness of the point you were trying (but apparently failed) to make; or go off and do whatever has been agreed.

Be sure to make a short summary of what occurred during each tutorial. This single sheet of paper should be photocopied with student and supervisors keeping a copy. In this way all can refer to what has been agreed, and have a continuous record of how the work and the supervision is progressing. There are several advantages to this systematic method of keeping track of the development of the research process. The student has an aide-mémoire of what was discussed. Ideas suggested by a supervisor are less likely to be forgotten, and work agreed to be done in preparation for the next meeting is recorded. For the supervisor, the summary serves as a reminder of the work of that particular student, thus greatly reducing confusion when more than one student is being supervised. In addition, if, unfortunately, any serious dispute arises between you and your supervisors, the summary can be used as evidence of what has been taking place.

It may even be necessary for you to help your supervisor to understand what doing a PhD means to you. For example, Mrs Briggs contrasted working on a PhD unfavourably with writing a book; she thought of it as preparation only for becoming a university teacher through creating and concentrating on artificial problems. However, as we have explained, a PhD is a thorough training in doing research and learning the criteria and quality required for becoming a fully professional researcher in a chosen field. It admits the holder to a club in which you are recognized as an authority and accepted as a person who is knowledgeable enough in a specialized area to be able to extend the boundaries of the subject when necessary. Doing a PhD is a hard training ground for a specific profession.

If, unusually, your department does not have regular seminars you can suggest introducing them. They should take the form of a meeting in which you and other postgraduates can discuss your ideas for research and the problems encountered en route. A meeting of this kind will make it easier for you and your supervisors to talk to each other on subjects not directly connected with the minutiae of your research.

Finally, if you want to succeed in managing your supervisor, you have to ensure that you do not make excessive demands and become a nuisance. Always speak honestly about anything that is bothering you and be direct in your requests and your questions. Take the responsibility for keeping

The following quotations show how the situation is seen by some supervisors:

> We're in business for overseas students. UK students can't even pay high fees if they wanted to. We can take any number of high fee students but we're limited on low fee places. (Philosophy)

> We can't accept all we'd like to accept. We reached the low fee quota very early this year and had to put good people on the waiting list. The high fee people go through the same process but don't have the barriers to acceptance of the home, low fee, students. (Sociology)

> We mustn't just take students for cash generation, it's a moral issue. (Business School)

In these cases, you will be treated helpfully but with an element of resentment from staff who may have had to pass over another student whom they would ideally have wanted to accept.

Not all departments take the view that large numbers of overseas students are preferable, however. It is also the case that some supervisors find foreign students are more work than 'home' students and do not actively seek them. It is important that you are aware of which situation you are entering as it may affect the way that you are treated initially.

Settling in to Britain

You may also find an added difficulty in getting settled into your research work because of the difficulties of settling into the country. You may feel excluded by home students who cannot put themselves in your position sufficiently to realize that the small things they take for granted, such as shopping or going to the launderette, can be major obstacles for you. It makes sense for you to anticipate these problems and find out as much as possible about Britain before coming.

One study by Hockey (1994) has noted problems with a lack of established relationships that have to be overcome by overseas students. He discusses the isolation experienced by so many research students and says that 'this social isolation, in the case of overseas students, may be compounded by a cultural disjuncture'. To illustrate he gives the following extended quotation from an interview he had with an overseas student who had been studying in Britain for a few months:

> One aspect that really makes me miss my family every night is the idea of going into the kitchen and cooking alone . . . I'm not used to that kind of feeling, I'm not used to sitting with your utensils, your food. You sit in the corner on your own and eat your food . . . Yes, it's certainly different, and you know, we have been brought up to think

Problems of communication, debate and feedback

In universities, as in any large organization, some of the important work is done during informal social time. While work can certainly be completed without such social activities, having access to them gives an advantage in terms of being admitted to the 'in' group. Sometimes women students are not included in these informal activities. It may be that they exclude themselves because these social events often revolve around drinks and they are not comfortable with the venue. Or it could be because they have young children to rush home for and other family responsibilities to take care of.

Maybe a woman was not invited because her particular supervisor is one of those men who still feels uncomfortable with women and is not certain how to communicate with them as equals. The only experience that some lecturing staff, as well as a few male students, may previously have had with women is in the roles of husband, father, son, brother or lover in their personal lives, or as manager or boss in their professional lives. Some men still do not know how to play the role of colleague to a woman.

Mapstone (1998) investigated the fact that women are more concerned than men about the potential damage to interpersonal relationships that argument might cause. Her work provides a reason for the fact that it is primarily men who speak in seminars. She explains that women expect to be criticized for expressing disagreement and that this often inhibits them from expressing their true thoughts. Men who argue are regarded as rational whereas women are regarded as disagreeable. Except where equality has been established in a relationship, women tend not to enter into an argument if they can help it.

Her research establishes just one more disadvantage that can work to the detriment of female research students. In the same way as their male peers, they are expected to proffer arguments to support their ideas when those ideas are under attack from people who have higher status. But Mapstone's work suggests that they are likely to have much more difficulty in doing so. Women are less able to perceive argument as rational debate and negotiation.

With this in mind we suggest that you introduce a supervisor management strategy that includes telling your supervisor(s) directly if you think that you have not been given sufficient information to be able to learn from your tutorial. Ask what precisely needs to be done in order to improve the quality of your work. You might ask your supervisor to put you in contact with other female academics in your field. They would not need to be highly placed members of staff but could be research assistants or part-time tutors. You might be able to extend your supervisor management strategy to initiating a discussion about the way you feel you

Harassment of people with a disability

Unlike the other forms we have been discussing in this chapter, harassment of people with disabilities is more likely to be the result of thoughtlessness and ignorance than a deliberate intent to hurt. This does not alter the fact that harassment of people with disabilities causes distress, interferes with their ability to work and can seriously restrict their opportunities.

The actual definition of harassment in the case of people with disabilities is comparable to that of sexual or racial harassment. Harassment of disabled people can, like the others, take many forms ranging from violent physical abuse to more subtle ways of making people feel uneasy, uncomfortable or angry because they have a disability. Included in the list of possible objectionable behaviours are:

- ☐ offensive jokes and comments that degrade people with a disability;
- ☐ bullying, humiliating and patronizing behaviour directed at a person because she or he has a disability;
- ☐ physical assault;
- ☐ circulation of leaflets, magazines, badges and other materials which degrade people who have a disability;
- ☐ graffiti.

Ways in which you can help to overcome problems of discrimination against you if you are disabled are given in the action summary

■ Action summary

The overall message for all these groups is to get what social support you can for your disadvantaged interests. In cases of harassment, make sure that the harasser is informed that the conduct is offensive to you.

For part-time students:

1. Choose a research problem that is related to your work.
2. Set aside regular specific periods of time for your PhD work and stick to them.
3. Keep in regular contact with supervisors, peers and the department. At the very least make regular telephone calls or send emails on your progress.
4. Explore the possibility that some financial support may be available from universities and research councils.

For overseas students:

1. Find out as much as possible about Britain and the British

For students with disabilities:

1. Familiarize yourself with your rights and entitlements under government legislation.
2. Discuss any problems with your supervisor and head of department.
3. Enlist the help of your university's officer for disabled students when you need support.
4. Keep a record of each incidence of harassment.
5. Discuss the problem with others and you may discover that you are not alone.
6. Contact your student union representative for help if necessary.

two constructs 'Escape/Has to be done' and 'Boring/Interesting for me'. When one of the two is reversed, it becomes clear that 'Boring' and 'Has to be done' are being used in a similar way. Because of this reversibility, complete mismatching between constructs is as significant as complete matching. A negative match between two constructs is a positive match if the poles of one construct are reversed. 'Matching' in this context refers to elements or constructs that are highly related to each other while 'mismatching' refers to constructs that are negatively related to each other. Elements or constructs that bear no similarity to each other are those where the ratings along them form no particular pattern.

CORE
The grid technique was also used to monitor change over time for each of the postgraduates as they proceeded through their three year course. In order to do this, consecutive grids from one individual were analysed using the Core program (Shaw 1978). This program analyses two grids, comparing each element and each construct with itself and prints out those constructs and elements that have changed the most in the way the postgraduate is using them.

This was reduced to the following:

p. 86 C reversed; matching and mismatching; CORE intr'd.

The pages before and after this were coded as below so that the whole section read as follows on the half lines:

Chapter 4 METHOD – pp. 82–9 sub-section Analysis of Grids
p. 82 Analysis: refers appendix pp. 289–91; interpretation same
p. 83 Reasons for Core and Focus
p. 84 Focus > > > > > 85 diagram of grid
p. 85 diagram
p. 86 C reversed; matching and mis-matching; CORE intr'd
p. 87 Core explained; diagram and eg.
p. 88 Diff. scores; 40% cut off, clusters and isolates
p. 89 calculations; FB new info. from re-sorted grids.

At the end of this exercise you will have achieved two important aims. First, you will have revised, in the most detailed way possible, the whole of your thesis and, second, you will be in a position to pinpoint – at a glance – the precise location of any argument, reference or explanation you wish to use during your viva. Not only will you be able to find your way around your thesis easily but you will probably be able to give a page number to your examiners while they are still thumbing through the document

11

HOW TO SUPERVISE AND EXAMINE

This chapter is principally addressed to supervisors. We shall be considering a series of strategies for improving supervision. It will help you identify aspects of the role that you may not previously have considered. But this chapter will also give students some insights into the tasks of their partners in this enterprise, thus helping to improve the quality of the relationship on both sides.

To improve your performance as a supervisor, you must understand what your students expect. Once you have this 'inside information' you will be in a better position to develop the skills necessary to teach the craft of research, maintain a helpful contract and encourage your students' academic role development. You will also be in a position, should this prove necessary, to modify these student expectations to make them more appropriate to their particular situation.

What students expect of their supervisors

In a series of interviews EMP found the following set of expectations to be general among students regardless of discipline.

Students expect to be supervised

This may sound like a truism but it is surprising how widespread is the feeling among research students of not being supervised. Academics, under pressure to research and publish as well as teach, consult and do administration, may find that doctoral students require too much of their

Even when supervisors do not have secretaries keeping guard in an outer office and maintaining their appointments diaries, research students still find it difficult to initiate an unplanned meeting – especially if it means having to knock on a closed door.

Sheila found that if she met her supervisor as they were walking down a corridor, or across the campus, she had difficulty in getting beyond the superficial exchange. Requesting a tutorial in these circumstances seemed to be inappropriate, in case the supervisor was in a hurry to get to a meeting or give a lecture. There have even been cases where students and supervisors have travelled a few floors together in a lift and the student has still been unable to say there is a problem or that a meeting is needed. Supervisors ought to be sensitive to these difficulties and maintain regular meetings, ensuring that the date of the next meeting is set during the current one.

When supervisors make it clear that they do not welcome impromptu meetings with their students because of the weight of other commitments, it becomes almost impossible for many students ever to muster enough courage to request a tutorial. This means that a student who gets stuck has to waste time waiting for a meeting arranged by the supervisor.

Students expect their supervisors to be friendly, open and supportive

In Chapter 2 we referred to the difficulties experienced, even by mature students, in informal social contact with their supervisors. We also pointed out the supervisors' ignorance of these difficulties. In this chapter the focus is on the more formal aspects of the relationship.

Many of the same tensions are present. Supervisors often feel that if they have established an easygoing, first-name relationship, their students will perceive them to be friendly and open. However, as we have seen, this is not necessarily the case. For example, Charles, who was doing a PhD in astronomy, said:

> It's very difficult to prise things out of Dr Chadwick, so I'm not sure if this meeting today will result in a big step forward for my research. Our meetings are rather silent affairs, as I wait for him to prompt me and he gives very little feedback and only chips in from time to time. I don't get much help, information or encouragement from him. I know that he is my supervisor and I don't want to slight him, but I seem to be avoiding him at present.

Here, Charles is expressing dissatisfaction with tutorial meetings to the point of trying to keep out of view of his supervisor. This made life particularly difficult, as they had rooms just along the corridor from each other.

strange rule. Surely a supervisor is entitled to criticize students? Yes, in principle, but in order to avoid the unfortunate outcomes listed above, it is useful for supervisors to remind themselves that they have to establish this right, on a regular basis, as part of the supervisory process. This can be done in the ways suggested below.

- ☐ *Underline that the purpose of feedback is to make progress*. Establish, and regularly reaffirm, that the doctoral process is a joint enterprise between student and supervisor, and that the point of feedback is to enable the student's knowledge and skills to improve. Create a mutually supportive atmosphere, ensuring that there are no interruptions.
- ☐ *Give the good news first*. Demonstrate that you are on the side of the student, that you appreciate what has been done, and that you are going to make a balanced evaluation by beginning with a detailed appreciation of the achievements of the work. Point out its strengths, and the improvement achieved compared with the previous submission. This builds student confidence and prepares the way for an open, non-defensive, non-dependent consideration of the inadequacies. The appreciation must be genuine. It is not effective to say: 'Well, it's an improvement, but . . .' and then immediately concentrate on the important criticisms to be made of the work. By the time you are enthusiastically into the four key criticisms, the student will have forgotten the original four words of encouragement.
- ☐ *Maintain a balance between the appreciation and the criticisms*. Major criticisms of the work should be preceded by major positive evaluations. A good rule of thumb is to match the number and gravity of the criticisms with an equal number of detailed points in appreciation of what has been achieved. If you cannot find four positive things to say about the work, you should consider whether the student is completely inadequate for doctoral level work and should be counselled to withdraw; or whether you, as the supervisor, are being unrealistic as to what can be achieved at this stage of the process and should adjust your expectations accordingly.
- ☐ *Present criticism impersonally*. Avoid being too personally identified with criticisms, so that the impact on the student is 'This is your criticism of me.' Start by asking students what inadequacies they are themselves aware of. This puts them in a frame of mind more conducive to objective criticism. Preface a major critique by saying 'I'm going to act as devil's advocate here'. Refer to comparable work which the student should emulate.
- ☐ *Present feedback related to the current piece of work*. Aim to keep comments totally relevant to the piece of work presently being evaluated. Do not refer back to similar mistakes in previous work, since harping on past inadequacies reduces students' confidence. Only refer to previous work in order to demonstrate how far the student has improved. Avoid

general comments on the personality or abilities of the student. Relate the feedback specifically to aspects of the work under consideration. So, do not say 'You obviously have a superficial mind; you must get a greater depth of understanding of this.' The comment acts as a general discouragement, whereas what is needed are examples of how the inadequacy is demonstrated in the present work and what tasks the student must undertake to improve.

Again, avoid comments on the student's abilities, such as: 'Your English style is execrable. You should do something about it,' since this comments on a skill inadequacy but does not give any clues about how or what to improve. The comments should be related to the work and should suggest changes to be made. If, like EMP, you believe that split infinitives and prepositional endings to sentences are not appropriate to doctoral writing, then examples might be: 'It is not good practice to split infinitives, as you have done on pages a and b' or 'On page x and page y, it is not a good idea to end sentences with a preposition.' These comments give pointers to what should be changed. You will look for other examples of inappropriate colloquialisms and ungrammatical constructions if, like DSP, you are quite prepared to blatantly split infinitives and think that a preposition is a very useful word to end a sentence with.

☐ *Present feedback clearly; work to minimize ambiguity in criticism; gauge how much the student can usefully absorb on this occasion.* A supervisor should not too obviously enjoy criticizing a student. This is not as easy as it sounds. A great deal of the enjoyment in academic life comes from critiques of fellow academics. This is often regarded as an art form in itself, replete with its appropriate allusions, nuances and put-downs. In the final stages of the PhD process, when the student is about to become a fully professional researcher, this style would be appropriate. In the earlier stages of the research however, critical feedback should be given with regret, be as clear and specific as possible, and be related to the level of development of the student. Damage limitation is important. If you give too much information about what is in need of correction the student may become overwhelmed and think that the task is impossible.

☐ *Pay attention to what your students are saying in response to the feedback you give and then reply to their comments*. Your reaction should demonstrate that you have taken account of what they say in the development of your views. It is important not to be so committed to your own view of the student's work that you are (or appear to be) unwilling to reconsider your views in the light of the student's responses. Always remember that effective feedback is that which is accepted by the recipient as a basis for further work, and you have to demonstrate your ability to accept feedback too.

This is true of anybody engaged in supervising another human being, but unfortunately it is too often the case that managers choose to ignore the 'whole person' and patch over, rather than get to the bottom of, any difficulties that are showing themselves in the individual's work. While this is true of life at work in general, it is even more true of life within the academic community. As we have mentioned above, academics do have some training opportunities but these do not usually include tuition in interpersonal skills and human relations. So it is important that you understand that research students are emotionally more involved with their work than are most people at work. Skill in giving effective feedback and eliciting information that may be relevant to poor performance at work is therefore even more important in the supervisor–student relationship than in the manager–subordinate relationship.

There is much less likelihood of finding those skills within the academic community, however. What is needed here is interpersonal training in how to state honestly and directly what you as supervisor perceive to be the problem, no matter how upsetting you think this may be for the student. It is far worse for the student to think for a long time that everything is reasonably satisfactory, only to discover at a very late stage that the work is not suitable for writing up for that the thesis will be entered only for an MPhil after all. Alternatively, the student may be aware that things are not as they should be but will imagine all kinds of causes for the problem, including a sudden and inexplicable antipathy on the part of the supervisor. It is far preferable for the student to have some definite information upon which to base decisions about future behaviour than to worry that something isn't quite right without knowing why.

For example, Charles, studying astronomy, wanted to know whether or not to continue. He said: 'I'd like to if I possibly could, but if Dr Chadwick thought I wasn't capable of it I wouldn't be too upset as long as he told me. Nobody seems to want to advise me.'

Dr Chadwick was disappointed with his student's slow progress and lack of initiative. He said: 'He's probably not very organized in his work, although one would hope there's some wider reading going on.'

However, Charles had reported:

> I asked him if he knew of any review articles but he doesn't think there are any. He was busy marking exam papers, so we didn't talk . . . I still haven't learned how to communicate with Dr Chadwick. There's no rapport between us, none at all. I saw him in the lift accidentally on the last day of last term and all we said was, 'Hello'.

On the other hand Adam, studying architecture, reported at the very end of his time as a research student:

> My supervisor never gave me any indication of what he thought of

me. I decided that he was so bored with what I wrote that he couldn't be bothered to criticize what I did. But really he was hoping that I would be the one to popularize the theories that have been around in his department for some years.

Adam had not enjoyed his years as a research student but was feeling much better as the end came into view and he had some measure of success at a conference.

Professor Andrews explained how the situation had eventually been clarified: 'We had several discussions about the direction his work was taking.' It is sad that this only happened once Adam had received support for his ideas from others, who actually did consider them to be excellent.

These two examples are typical of the situations that develop when supervisors do not keep students informed of how they see their progress through (a) regular meetings and (b) honest feedback regarding their work.

Introducing a structured 'weaning' programme

Supervisors can help research students become progressively more academically independent by introducing a process of weaning into their style of supervision. This weaning process must include helping the postgraduate to become aware that they have sufficient knowledge and ability to trust their own judgement and monitor their own performance. This can be achieved by a structured programme that gradually reduces the amount of dependence as the research student gets further into the work. First, you should set short-term goals (and a close date for a tutorial meeting). Later, students can be left to undertake a more complex piece of work over a longer period. A date for reporting progress by a telephone conversation, email or letter should be set, together with a more distant date for a meeting. If the student has to move from the date originally arranged, an adequate explanation is required. You should also have a very good reason to give your student if you decide to change the original date.

In the final stages the onus should be more on the student to initiate the contact than it was in the beginning, but you should still be aware of a responsibility to chase up a student who does not seem to be keeping to the agreement.

Later in the process students must be helped to develop skills of writing and presenting conference papers, journal articles, seminar presentations, thesis chapters or even reports of work undertaken since the last tutorial meeting. Get to this point by encouraging the following activities:

- ☐ First the student prepares a rough draft that sets out 'This is what I think', then corrects and rewrites the draft without referring to you.
- ☐ Next, after discussing the first corrected draft with you, the student

prepares a second corrected draft that sets out 'This is what I and my supervisor think.' Then the student can again give the draft to you for comment.

- ☐ Finally the student prepares a final draft that states 'This is it', and may keep it as a record. At the end, all well-written records can be used and integrated into the thesis itself.

The way to encourage students to use their supervisors to best advantage is to set goals that initially are short-term but become more abstract and take longer to reach as the student becomes more experienced and develops more confidence. In Chapter 7 we described in some detail the setting of goals within a time management programme (see diagram p. 83). It is important for you, as supervisor, to be aware that the length of time that it takes for research students to become autonomous researchers depends on the type of supervision that they receive. If they are continually set very short-term goals with the requirement that they complete a relatively simple piece of work, they will never learn how to manage their time, tasks and deadlines for themselves. If they are left to their own devices too early, however, or given deadlines that are too far into the future before they are ready for this degree of unstructured planning then they will not learn how to cope on their own.

Supervisors must adjust the way they supervise to the particular needs of individual students. Some students will take a relatively long time to develop the necessary confidence. They will need to be closely monitored and given well-defined tasks to be completed in a relatively short period, until they are well-established in their research. Other students will need to be given general guidance from quite early on in what they should be doing rather than detailed direction. Supervisors should remember that all students will once again need closer direction when they start the final writing up of their theses.

One student requiring guidance early on was Greg, who was researching in ancient history. Dr Green explained that Greg

> usually suggests the meetings, but once last term I was concerned about him and asked to see him. I didn't have to chase him. I just make a passing reference or suggestion and next time I see him he knows the text better than I do. He works extremely well.

She saw her role as that of guide, not only because Greg was able to work well under his own direction but also because he was fascinated by the information he was accruing about the person he was researching and the times in which he lived. Every bit of additional knowledge served to motivate Greg to explore further. His main request of his supervisor was that she be ready to listen to the results of his latest detective work.

- ☐ ask your students what their expectations are;
- ☐ agree a compromise incorporating any changes.

Handling the situation in this way would ensure that the student felt the supervisor was neither uncaring nor lacking in control. It would underline the fact that the supervisor and the student are in a partnership.

In order to maintain the psychological contract at an appropriate level it is important that you play your role as supervisor in a firm way. If you let your professional judgement be swayed by a fear of seeming to be too tough at a time of difficulty in a research student's career, you will not be providing help at a time when it is most needed. The help you need to provide is to chart a course for the student, avoiding the extremes of, on the one hand, easing the path completely and, on the other, leaving the student to founder, simply so that you might appear more sympathetic. It is not your sympathy that the student needs, but your expertise.

■ Encouraging students' academic role development

It is not sufficient for supervisors merely to ensure that postgraduates' research and their reporting of it are progressing satisfactorily. As PhD students get closer to the goal of gaining the research degree, so too do they get closer to recognition as a full professional. But becoming a full professional means more than having completed a research project to a satisfactory standard: it means being able to contribute fully to academic life. It is part of the supervisor's job to help students prepare for this.

This preparation entails encouraging your students to give seminars on their research and related topics and to attend seminars that others are giving. It means helping them gain the confidence to question and comment on what has been presented by the speaker. Research students should also gain experience of attending conferences, speaking from the floor (as they have learned to do in seminars) and giving papers of their own.

These papers may be of an appropriate standard for publication, in which case you, as the supervisor, must initiate the students into the secrets of getting their work published in reputable journals. You could also give them a helping hand by introducing them to your own network of contacts and encouraging them to get in touch with colleagues who are working in their area of interest. In addition, you should facilitate their progression into academic life by trying to give them occasional tutoring work and letting them know when further teaching possibilities are offered – for example, a weekend or summer-school post.

Giving such support to your students will not take up very much of your time and energy. When there is a conference you want to go to, all you

have to do is mention it to them and perhaps sign an official request for help with their expenses. Similarly, inviting them to lunch with you once or twice when you are meeting a friend from another university does not make much of a demand on you, yet it has dividends for the students out of all proportion to the effort needed.

■ Supervising non-traditional students

Supervisors need some understanding of, and sympathy for, the difficulties that non-traditional students face. By non-traditional we mean any of those student groups covered in Chapter 9. There we discuss these problems fully, primarily from the point of view of the student. In this section we discuss these issues from the perspective of the supervisor, assuming that you have made yourself familiar with the appropriate section of Chapter 9. By becoming aware of issues that these students are facing, supervisors will be in a position to offer support and information when, for example, overseas or disabled students have to be pointed in the direction of appropriate people or organisations for assistance.

Part-time students

Part-time students are now in a majority in many disciplines where appropriate arrangements are made for their requirements. But in those disciplines where they are still in a minority, supervisors should ensure that they are not disadvantaged. Even when they are no longer a minority, part-time students still have particular difficulties because most of their life is spent *not* as a student.

Problems of access

Opening hours of academic and support facilities in the university are not necessarily consistent with part-timers' need to use them. Library times, for example, should be extended so that students who are not available during usual working hours can still gain access to books and journals. Access to such amenities as computers, use of the Internet and assistance from statistical services is more difficult for them than for full-time students

Part-timers may also suffer from a lack of opportunity to meet others because of the restricted time they have available to spend at university. As well as limiting their exchange of information with peers, they can be further disadvantaged if communication of changed locations or cancelled seminars does not reach them in time. There are also limits to their being effectively represented at staff–student or postgraduate meetings

bureaucratic way. In general, examiners look for conceptual understanding, critical ability and an explicit and well-structured argument. There is usually basic agreement within a discipline concerning what they are looking for in a good candidate.

Even so Phillips (1994b) found that supervisors and examiners cannot easily talk about the level of competence required for a good PhD. They tend to see each as a unique product not open to generalizations. They claim to recognize when a thesis is really bad, but say that only experience teaches them to know what is interesting and exciting.

The regulations of the university usually include phrases like 'making a significant contribution to knowledge or understanding' and 'demonstrating a capacity to undertake independent research'. These have to be applied in a large range of situations which will inevitably involve a great deal of judgement on the part of the examiner concerning the particular case, in the particular discipline, at the particular time.

Examiners, like students, have to be aware of what standards are being applied in their discipline by regularly reading and pondering upon newly successful PhD theses. They need also to be aware of articles being published in journals in their field to be able to recognize what currently counts as a contribution to the discipline worthy of publication. The examining process may be helpfully compared to refereeing articles submitted for publication to journals. These give an idea of standards at the forefront of the discipline. They help examiners to cope with such questions as: Does the thesis show impressive depth? Does the student demonstrate excellent critical understanding of the issues involved? Has the student creatively integrated the research material to indicate attractive future lines of work? These are questions which often have to be reformulated into: Does the thesis show *enough* depth? Does the student demonstrate *adequate* critical understanding? Has the student *sufficiently* integrated the research material to indicate future work? As in any examining situation, while examiners hope and look for excellent work, even at this high level they are soon faced with the question: Is this good *enough*? It may be helpful to reflect that, just as a First and a 2.2 are both regarded as acceptable honours degrees, so a PhD thesis may be considered acceptable even if it is not consistently excellent.

However, students are often confused about what is required of them and would like guidelines on method and form at the beginning. Even when departments do provide some information, students can feel frustrated that what they have been told does not accord with what they were hoping to hear. One student expressed what many were feeling when he said: 'At the seminar where the basic outline of a thesis was recommended there was an emphasis on the problems of having to reduce an exotic, once in a lifetime experience to a dry as dust thesis format' (Phillips 1994b). In such a situation supervisors have to help students come to

terms with the fact that there is a standard form to which the thesis must adhere.

One topic that is often raised in the discussion subsequent to the oral defence, is the problem of dealing with the candidate who has clearly been the victim of inadequate supervision. By implication the supervisors involved feel that they too are being examined and become very defensive in arguing that what has been done is adequate for the PhD degree. Indeed it was for this very reason that supervisors were eventually precluded from being internal examiners as used to be the procedure in most universities. Examiners have to face the question: Is it fair that the candidate be penalized for what is patently a failure of the supervisor? The answer has to be that, since standards have to be maintained, sympathy for the candidate is properly limited to allowing the conditions for the resubmission to be as generous as possible.

As we noted in Chapter 3, research councils put considerable pressure on universities to complete the process of doctoral education and get candidates to submit their theses within four years of registration. As a result they have pushed up the percentage of students who submit within this time frame. But this change has lead some to wonder whether the time limitation has caused a rush to submission and therefore an increase in the proportion of candidates who are referred for further work, since this is acceptable under the research councils' rules. At the time of writing, we do not have adequate information on whether this is the case.

A less fortunate outcome would be pressure on examiners to allow borderline theses to pass on the argument that the university department needs to achieve a satisfactory number of successes for research council appraisal purposes. These pressures must be stoutly resisted, if for no other reason than that the research councils strongly proclaim that it is not their purpose to drive PhD standards down, only for them to be achieved more efficiently.

As we discussed in Chapter 10 on the examination system, the aim of the PhD process is to get the student to the stage of being a fully professional researcher. The PhD examination reflects this. The degree is awarded on the candidate's academic achievement which includes the thesis itself, defence of it at the oral examination and any supporting material in the discipline that the candidate has carried out and published. The viva is thus a key part of the examination, and it is inappropriate to decide that the thesis itself justifies the award of the PhD degree before it has been defended. This is for two reasons.

First, it is one of the functions of the viva for the examiners, through their questions, to satisfy themselves that the thesis is genuinely the work of the candidate. They even have to sign a declaration to that effect. Second, as we explained in Chapter 10, one of the possible, though rare, outcomes of the process is the examiners' decision that the written thesis

programme, such a series of regional networks, referred to as 'hubs', has been set up. They cover the whole country as listed on the UK GRAD website <*www.gradschools.ac.uk*>.

The hubs are a collaborative effort between the participating universities, with some support from the research councils. For students, they aim to provide advice on access to materials and to facilitate linking between institutions to increase the provision and quality of programmes offered. The hubs also offer assistance in encouraging networking between academia and regional employers as a contribution to increasing the career options of doctoral graduates.

For staff, they host 'training the trainer' courses and 'good practice workshops' which provide opportunities for both new and experienced supervisors to develop their skills, as we advocate below (pp. 187ff). For those responsible for the design of doctoral education, they offer meetings on a number of topics such as 'stretching your postgraduate skills training budget'. The Yorkshire and NE Hub workshop 'showcases a variety of postgraduate skills training options available to suit all budgets'. Universities should make resources available for their members to participate in hub activities.

As part of the future development of hub activities universities might also engage in more collaborative research and coordination so that students from other universities can attend relevant seminars at their local university. This could be extended to include lectures and access to computers and other technical equipment on campus. During the long summer vacation, when university facilities are underutilized by more conventional students, study rooms and libraries could be made accessible to additional postgraduates. It would involve little or no expense to offer these facilities on a reciprocal basis, always provided that a good relationship had been developed between the home and the local university.

■ Support for students

Facilities for departments to support doctoral research activity

Every department should have the space and resources to provide a room with desks, available for the use of research students. This would serve as a common room that postgraduates in other faculties and departments would be able to use as a location point for contacting people in related but different areas. The institution should ensure that there are adequate facilities for research students including, for example, laboratory space and apparatus, access to a technician, as well as the more general resources of adequate library and computing services.

In order to encourage successful research and a feeling of belonging to an academic community, universities must set aside financial resources for

research students' use. These would be relatively modest, probably not more than would be required to support such activities as the occasional postal survey for social science or business students, additional cultures for biology students, microfiches for history students, conference fees, photocopying and travel costs.

It is also important that facilities and resources available for full-time students are at the disposal of the increasing numbers of part-time students. Library hours, for example, may need to be extended so that students who are not on campus during usual working hours can still gain access to books and journals. The availability of computer facilities and specialist statistical help may similarly need to be extended.

A university-wide structured induction procedure

All institutions should adopt a university-wide structured induction procedure for newly registered research students. After an induction conference, every new research student should be required to attend a regular series of meetings (weekly, fortnightly) led by members of staff from the university research school. It is important that new students know that there are identifiable academics who have a major responsibility for them.

The meetings should continue over the first six months. In the beginning they should cover informative topics about the university: how to make the best use of the library services or the academic computing services; where to find relevant academics or research students in other departments. If we are members of universities, we forget how hard it is to join such large institutions and how easy it is to become lost. 'Leave them to their own devices to settle down' is a most inefficient and punitive strategy for this stage of the proceedings.

As Phillips (2001) advocates, later meetings should cover such process topics as the relationship between students and their supervisors, expectations and fears of the research student's role, the importance of working to deadlines – in fact most of the issues with which this book has been concerned. As recommended by the research councils, sessions encouraging the development of the generic skills of communication, personal effectiveness, team working and career management, should be part of this programme. As well as helping the student at the time, these skills will increase employability on graduation.

Such a programme achieves, at the very beginning, the raising of awareness of the processes involved in undertaking a three-year period of research training. Students may be told about the different stages through which they can expect to pass. This will not protect them from experiencing boredom, depression and the rest but at least they will be able to recognize what is happening to them when it does happen and this will be valuable. Invited speakers to the group could include a newly successful

PhD graduate, an administrator from the registrar's department with responsibility for the formal system, and so on.

Such a series of meetings enables students to identify others in a situation similar to their own and so makes them feel part of a community, rather than reinforcing the differences between disciplines and faculties. It introduces them to the common problems of being a research student and provides them with some knowledge and skills to tackle these. Finally, it creates a network and enables them to choose whether they wish to continue meeting as a group, perhaps without any member of staff, to discuss their progress and their problems. The specific problems of overseas students should also be included in the programme.

A handbook for university research degree students

The handbook for university research degree students should be regularly updated. It is an important part of communicating the nature of research degree study and the university framework within which it takes place. Key information would include: a description of the university structure, regulations for registration, upgrading, vivas, examinations, awards and a code of practice for supervising research students. This should be prepared with the participation of research student representatives of the student union. The code spells out what is legitimately expected by students of supervisors (e.g., appropriate expertise of the supervisor in the subject and topic, minimum frequency of supervisory tutorials, prompt and constructive response to submitted written work) and, in turn, by supervisors of students (e.g., to work conscientiously and independently, to keep a lab record of experimental work, to present written work at the agreed time).

It is also the responsibility of the institution to provide within its regulations an ethical and professional code for staff to follow. This should provide guidelines particularly relevant to research students, such as ethical aspects of experimentation and data collection, the inadmissibility of plagiarism and data falsification. Issues of harassment and establishing appropriate relationships between staff and students should be included. Remember too that it is only through ethnic monitoring that universities can tell whether they are treating students fairly and if they are really providing access to research degree study for a diversity of students from different backgrounds. Correctly implemented it can help to inform not only against barriers to access but also against barriers to successful progression once access is gained.

English language support where necessary

Where students from non-English speaking backgrounds are accepted for a research degree it is the responsibility of the institution, not the

individual supervisor, to provide English language training. The university should make provision for this by offering classes to all who need them. Native English speakers may sometimes benefit from these classes too.

The importance of being able to write in acceptable English is often not emphasized at the point of selection into the system. It is unacceptable to take high fees from overseas students without providing an appropriate service in return. Indeed, British universities have an unfortunate reputation in some countries for the double standard involved when students with inadequate English are awarded a doctoral degree. Resources need to be allocated to remedy this situation.

Students need to have impressed upon them very early in the period of registration that they must improve their command of English. It is important for them to be aware of precisely the level of written English needed for an acceptable thesis. Too often, it appears that any focus on the standard of written English required is left until the empirical research work is almost completed, which is too late.

Support for non-traditional students

With the increasing diversity of students, institutions should ensure that the academic environment is free from harassment or discrimination. Universities must establish policies and practices to support their less traditional research students. These should cover such issues as those discussed in Chapters 9 and 11. Policies to encourage the development of equality, integration and affiliation between all students are needed, together with procedures that provide support for victims of, and complaints about, harassment in all its forms.

A particular problem for gay, lesbian, bisexual and trans-gender students is the fact that, unlike other non-traditional students, they have to decide whether or not to declare themselves openly. The elimination of heterosexist harassment can be assisted by creating a safe atmosphere, where such students feel that they can be open about their identity.

■ Resources for supervisors

The training of supervisors

Training is needed in order to help academics to develop more effectively in their roles as supervisors. We take this view as a result of participating over a period of years in discussion groups attended by supervisors from many different universities, where we have seen the benefits they gain in knowledge and skill.

A majority of universities are accepting this responsibility and allocating resources to enable training groups to be mounted for new supervisors, but

made an original contribution by undertaking an effective application of theory and knowledge in a professional setting.

The fact that these degrees have been instituted in the last decade has meant that the current focus on specifying educational outcomes in the design of programmes has had a major impact. All the programmes involve students in carrying out specified activities on the way to the final project in order to develop their research and professional skills. These modules typically include advanced taught courses, surveys of research and professional developments in the field, a research proposal, etc. Each of these modules is subject to assessment and satisfactory completion is required before the candidate can proceed to the final project (which may be called either a dissertation or a thesis).

The final project is typically the application of professional knowledge and skill to the solution of a practical problem in a real world setting. The supervisory team will include an academic from the university and a practitioner from the relevant organization in which the application takes place. (The examining board will also include academic and practitioner representatives.) Since successful completion of the earlier projects is required and taken into account in the award of the doctorate, the word length requirement of final dissertation project is shorter than that of the PhD. Typically the word length limits are set at 30,000 words for these doctorates, compared with 80,000 to 100,000 words for the PhD.

A key issue in these doctorates is the level required to demonstrate an original contribution to professional practice, and thus justify the degree of Doctor. As we argue in Chapter 5, problem-solving research of itself requires a candidate to demonstrate a higher level of professional skill to make a contribution, certainly at the PhD level. Strangely the student here is often required to spend less time on the final project.

What does originality mean in this situation? The question inevitably arises as to whether a competent application of current professional skills and techniques to a real-world situation of itself shows sufficient evidence of originality. The obvious answer to this question is no, a master's degree is the appropriate qualification for an effective practitioner. Something more is required to demonstrate a contribution and justify a doctorate. So a key component of the final thesis required in many cases is a self-analysis of the work carried out and a reflection on the use of academic knowledge in a practical situation. Successful candidates will be skilled and experienced professionals who have not only practised but pondered on and analysed the use of their academic and practical knowledge. The lessons learned from this reflection are evaluated as a contribution to professional practice.

How does the thesis of the professional doctorate compare in level to the PhD? Although the regulations of many universities in regard to the EngD require that the dissertation be of PhD standard, most are silent on this

P2 Under no circumstances will I take a new job before finishing my PhD.

SA A U D SD

P3 I understand clearly the standards that I will be required to achieve in my thesis.

SA A U D SD

P4 I am confident that I can make 'an original contribution to knowledge' in my thesis.

SA A U D SD

P5 I have a plan for my work which I stick to, and so can evaluate my progress.

SA A U D SD

P6 I regularly set myself realistic deadlines and achieve them.

SA A U D SD

P7 My research work is directed towards making a contribution by having an argument to maintain (i.e. a thesis).

SA A U D SD

P8 I take every opportunity to produce written work (reports, draft papers, draft chapters) in order to improve my writing skills.

SA A U D SD

P9 Overall, I am satisfied with my progress towards the PhD.

SA A U D SD

Support from my supervisor

S1 My supervisor is an experienced researcher with a good knowledge of my research area.

SA A U D SD

S2 I am confident that my supervisor understands the level of work required for a PhD, and neither under nor overestimates it.

SA A U D SD

S3 I am in regular contact with my supervisor, who is always available when needed.

SA A U D SD

S4 I get a great deal of help from my supervisor, who is friendly and approachable.

SA A U D SD

S5 My supervisor always reads my work well in advance of our meetings.

SA A U D SD

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