

PART THREE - ACADEMIC MATTERS – RESEARCH GUIDELINES (UPDATED AUGUST 2026)

1. PGR Code of Practice (CoP) System and NU Reflect

1.1 PGR Code of Practice System

The University uses a [PGR Code of Practice System](#) (PGR CoP) to administer the formal processes and milestones associated with your research degree programme as listed below:

- Full record of the approval process of your research project
- Full record for the annual progress review each academic year
- Full record of the approval of thesis title and nomination of examiners
- Full record of any change of circumstances requests (e.g., interruption, extension, outside study)

1.1 NU Reflect

In addition to PGR CoP, the University provides the NU Reflect system which is designed to provide you with a record of your individual personal and professional development and to assist you to get the most from your postgraduate experience, helping you to plan and reflect upon your research and how it will relate to future aspirations. It will help you to identify areas of strength and those areas you feel need more attention, while improving your research and generic skills and identifying opportunities for personal development.

NU Reflect will:

- Provide a record of your personal and academic development
- Help you plan and reflect on your research
- Identify areas of strength and where you need more support or training
- Record the acquisition of skills and self-development, which will be useful for CV preparation
- Help you to understand and learn from 'life' experiences and how these can contribute towards your future prospects by providing examples of skill developments
- Allow opportunities for reflection and self-evaluation on your progress and future needs
- Introduce the concept of continuous professional development
- Help you to demonstrate and be aware of all the intrinsic skills your research degree will allow you to develop

In addition, NU Reflect provides you with a way of recording your formal interactions/meetings with your Supervisory Team.

All your [NU Reflect](#) content is downloadable and portable at the end of your time at Newcastle and will be invaluable in preparing your next career move.

2. Personal Development Plan (PDP)

You are encouraged to maintain a personal development record primarily because it allows you to be 'in charge' of your own development. At the start of your research degree studies, you should identify the development/training that you will require to enhance your skills to complete your research project. [Professional development planning \(PDP\)](#) is a process that will help you highlight areas of strengths and areas for improvement by mapping your current skills against the [Vitae Researcher Development Framework \(RDF\)](#).

This can be developed by completing a Training Needs Analysis (TNA) on NU Reflect and designing personal objectives to create a personal development plan in conjunction with your supervisory team.

NU Reflect should include a description of the skills developed, cross-referenced to the Researcher Development Framework. The professional standard for recording your skills development is set out and the following is a list of 'essentials' that should be recorded in NU Reflect:

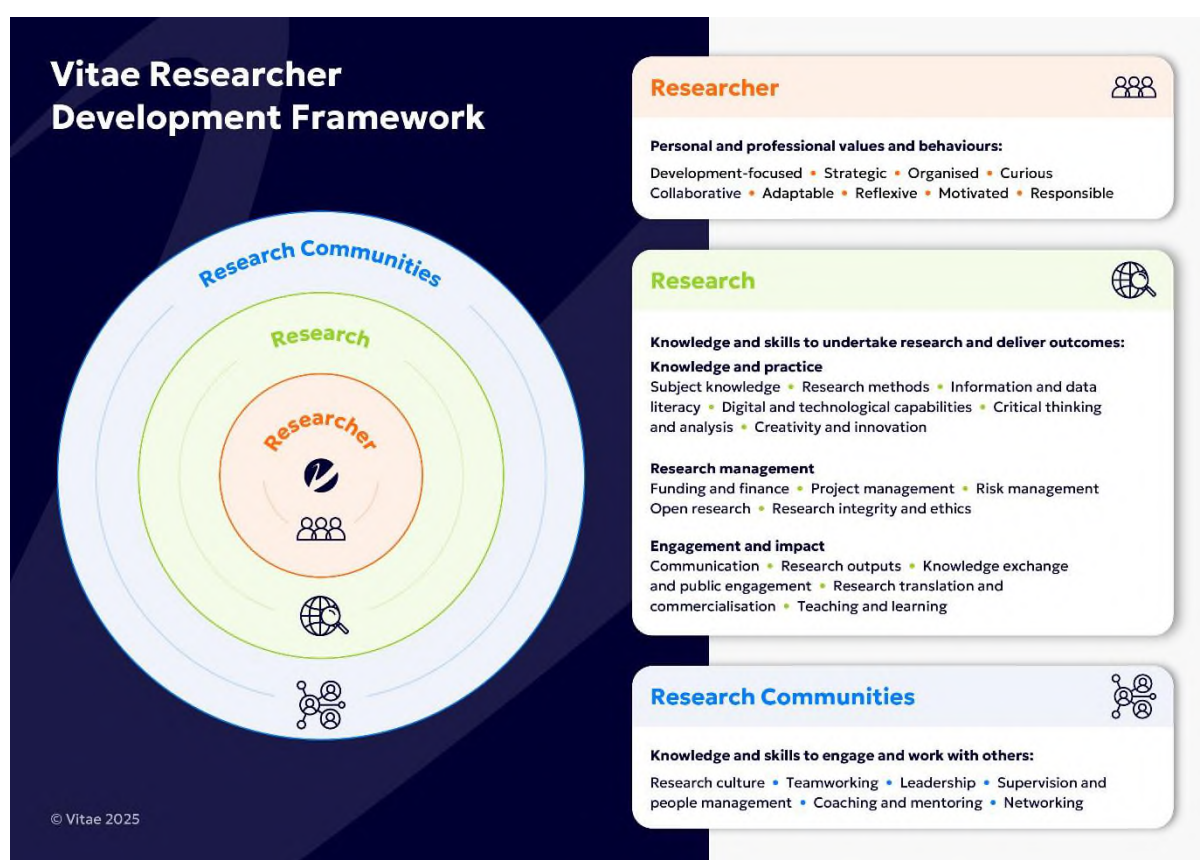
- Lab meetings, seminars, conferences attended *N.B. Postgraduate researchers are required to contribute to the research environment by attending appropriate internal and external events.*
- Any training courses attended including Faculty Researcher Development Training programme courses, which are automatically recorded in NU Reflect.
- Abstracts presented at local, national, and international meetings with other relevant information (poster, oral presentation, presenting author etc). *N.B. You are normally required to give at least one formal presentation per year on your work.*

- Publications, including manuscripts in press and abstracts where published.
- Exhibitions and/or performance including venue, location, and duration, indicating whether it is a commission or competitive selection process
- Work experience and other information relevant to your future career (teaching/ demonstrating, work placements with industry/ business etc, time spent within other academic institutions.)

2.1 What Skills?

The Vitae [Researcher Development Framework \(RDF\)](#) has recently been refreshed and articulates the knowledge, values, skills, and behaviours of effective researchers, and is used for planning, promoting and supporting the personal, professional and career development of researchers. The RDF is designed for:

- researchers to take control of their own professional and career development
- managers and supervisors of researchers in their role supporting the development of researchers, researcher developers, human resources specialists and careers advisors in the planning and provision of support for researchers' development.



In conjunction with the skills above, the University encourages you to: develop relevant academic networks, attend seminars and conferences, present papers, publish papers, exhibit, and perform work, support your own career development, and contribute to your research environment by attending appropriate internal and external events. All three Faculties offer extensive [Researcher Development and Research Training sessions](#) and you should include these in your PDP.

2.2 Creating a PDP

To create a PDP, you will need to assess your skills abilities, identify your specific needs/ skills gaps, and then decide what form of training can be used to meet these needs. Training can be both formal (courses/workshops) and informal (supervisors/research colleagues) and can include aspects of your research, i.e., attending seminars, conferences etc. You will be expected to audit your skills and update your PDP annually. Your NU Reflect should be continually updated with information on training related to both aspects of your research and your transferable skills. By setting goals and targets in your PDP it can keep you focussed on developing your skills. Continual reviewing and reflection will help you to determine

whether you are effectively meeting these goals when used in the PDP process.

1. **Identify goals** – Completing your research degree and meeting the training requirements of the Researcher Development Framework.
2. **Determine the skills required** - Assess your skills in relation to the RDF and note areas where you need to develop or learn a new skill/ technique
3. **Identify Training and Development Needs** – This is known as a **Training Needs Analysis** (TNA) and is key to your development. The TNA should be carried out early in your research degree programme and at least annually thereafter. Identify workshops or other activities based on gaps in your skills or areas where your skills could be improved.
4. **Create a PDP** – The programme of workshops and other activities that you identify become your own PDP.
5. **Record Training** - Build a record of your skills achievement and skills profile in NU Reflect
6. **Evaluate and Review** – At each stage of your research determine whether you are making progress towards your goals and re-evaluate your skills

2.3 Timescales: When to use NU Reflect

Your role is to reflect on and evaluate your progress, therefore it will be important that you maintain and keep appropriate records. The PDP should be started at the beginning of your research, building on the information, experience and results you gain as you progress through your research degree. The Annual Progress Review Panel will review the research training that you have taken as part of your Annual Progress review, in relation to Faculty Research Training requirements and your own PDP and TNA. At each Annual Progress Review, your progress review panel will also discuss barriers/recommendations for self-development and training. *Please remember the generic/transferable skills aspect of NU Reflect is not a test – it is your assessment of your development.*

3. Feedback

To assist and improve the provision and quality of your Faculty Research training it is important to provide feedback on your experiences.



Guidelines for Research Students and Supervisors

Introduction

The purpose of these guidelines is to:

- Describe the essential elements of Research Student/Supervisory Team, as well as detail the minimum requirements that you and your Supervisory Team will be expected to comply with during a research programme at Newcastle.
- Outline Newcastle's practice and expectations of Research Students and Research Supervisors
- Provide good practice guidance for you on managing your Research Degree studies and for Research Supervisors

Where reference is made to any named University role, such references are to be read as including reference to their nominees. These guidelines use Academic Unit as an overarching term for School and Institute.

Summary of Newcastle Practice

1. It is the responsibility of each Head of Academic Unit or nominee (usually the Director of Postgraduate Studies) in consultation with the proposed Academic Supervisor to decide whether to recommend the admission of an applicant to undertake postgraduate research in an Academic Unit. In reaching this decision the Head of Academic Unit or nominee should consider:

- a) Whether the candidate is appropriately qualified for the proposed subject of study and whether adequate academic references have been received;
- b) Whether the appropriate resources (e.g., library, computing, laboratory, studio/ workshop facilities or technical assistance) will be available;
- c) Whether, on the information available, the subject of study is suitable for the degree for which the candidate is to be registered;
- d) Whether it can reasonably be expected that the subject of study will be completed within the timescale prescribed;
- e) Whether proper supervision can be provided and maintained throughout the research period;
- f) Whether an appropriate programme of training and guidance in research can be offered to the candidate.

2. At the commencement of the research programme, you will have a formal induction at both Faculty and Academic Unit level.

3. The Supervisory Team will contribute to this induction by having a detailed discussion with you during which they will ensure that you have received, understood, and accepted the expectations of the research programme, as well as the scope of the proposed programme of work and an initial definition of the subject of study with particular emphasis on:

- The importance of completing the programme in the time available;
- The standard of work that will be expected from you (you are advised to read successful theses available in the [Library](#) as a guide to what is expected);
- The importance of a Personal Development Plan (PDP) and your expected commitment to it.

Following this discussion, a formal Learning Agreement should be completed by both you and your Supervisory Team (in the [PGR CoP system](#)) within one month of registering on the programme. The Graduate School will record completion of the Learning Agreement on your student record.

You and your Supervisory Team should also discuss the following, which should form the basis of your project proposal, which will need to be approved before candidature is confirmed:

- a) The overall timetable for the planning and completion of the programme of work, including any period of preliminary reading and the writing of the thesis. You should record this in your Personal Development Plan (PDP) within NU Reflect;
- b) Any programme of training and guidance in research;
- c) Guidance about the use of literature, other sources of information, including other members of staff, and about attendance at appropriate courses and meetings of learned societies;
- d) Appropriate guidance should be provided by the Supervisory Team to enable you to avoid any possible concern about plagiarism or the fabrication of research results.
- e) Good practice in relation to [research data management](#), including the storage and retention of research data;
- f) Constraints, other than time, which may affect the programme of work, such as costs and the need to design and build equipment and any ethical concerns;

- g) An initial consideration of potential issues of confidentiality or intellectual property;
- h) Agree a programme of regular meetings between yourself and the Supervisory Team to monitor progress on the research and to review the details of the overall timetable for the programme of work, including who is responsible for arranging these;
- i) The submission of written work and/or the presentation of seminar papers while the research is in progress and the possibility of presenting work at meetings of learned societies and/or of submitting it for publication.
- j) If you have a formal sponsorship, you and your Supervisory Team should discuss terms and conditions of the sponsorship, to ensure they are understood.

4. You are expected to:

- Maintain regular contact with your Supervisory Team;
- To seek the advice of your Supervisory Team on the planning of work and other matters, including the use of suitable techniques;
- Present written work as appropriate;
- Raise any problems and difficulties to the attention of your Supervisory Team, which you believe may have an impact on progress, which includes: domestic, social, financial or health factors;
- Manage and develop your PDP.

5. Supervisory Teams are expected to:

- Maintain regular contact with you and provide advice on work planning;
- Request written work as appropriate and provide you with constructive comments and review practice-based outputs/work (where appropriate);
- Take an active interest in your PDP and offer help and guidance in achieving development goals.

Approximately once a month (for full-time students), you will have a formal meeting with at least one member of your Supervisory Team to review progress and are required to record and maintain records of these supervisory meetings in NU Reflect.

There should be regular contact with each member of your Supervisory Team, at least on three occasions each year. At least one meeting each year should be held with the full Supervisory Team to discuss your progress, usually in advance of your Annual Progress Review.

Part-time students should discuss and agree the number and type of formal interactions while completing the Learning Agreement. There should not be more than ten weeks between supervisory meetings.

7. You should submit a project proposal for approval (on the PGR CoP system) within three months of registering on the programme (full-time students) or six months of registering on the programme (part-time students). This should address the practicality of any fieldwork and whether there are any constraints, dangers, or ethical concerns. Progression on the programme will be dependent upon acceptance of the project proposal by an impartial Project Approval panel. Please note that before any fieldwork or outside study is conducted, an Outside Study Form must be submitted and approved by the Dean of Postgraduate Research and ethical approval should be in place for the activities to be undertaken.

8. Progress on the programme will be formally monitored through an Annual Progress Review (APR) (note that programmes with an initial taught component will have alternative monitoring arrangements, at least initially, e.g., Integrated PhD, Professional Doctorates). Each year, you and your Supervisory Team will be required to submit a report on the progress of the research, which will be considered by an impartial APR Panel. (The APR forms are completed on the PGR CoP system.)

9. As part of the APR, you will be required to produce at least one substantial piece of work (e.g., literature review, experimental write-up, creative output), in order to help assess your ability to proceed successfully through the programme. You may also be required to make a presentation of this work to other staff and/or students.

10. The APR report forms completed by you and your Supervisor Team will be considered by an impartial APR panel, which will consider all the evidence, including the annual report from the Supervisory Team, and determine whether progress indicates that the research project will meet the standards for the award of the degree. The APR Panel will make one of the following recommendations, as well as providing a report on progress:

1. Proceed – that performance is satisfactory, and you can proceed to the next stage.
2. Proceed with Concerns – overall performance is satisfactory, and you can proceed to the next stage, but the Annual Progress Review Panel has some concerns, which you and your Supervisory Team should note;
3. Re-Assessment - that performance is unsatisfactory and that a further progress review should be held normally within two months to determine whether progress on the programme will be recommended;
4. Downgrade to MPhil (for Doctor of Philosophy students only) - that performance is unsatisfactory and that a submission for a Master of Philosophy examination is recommended instead of a submission for a Doctor of Philosophy examination;
5. Withdrawal of Registration - that performance is unsatisfactory and that no submission for a Master of Philosophy or Doctor of Philosophy examination is recommended. You will not be permitted to continue as a registered student for either degree and your registration will be withdrawn.

All recommendations are subject to approval by the Dean of Postgraduate Research.

11. If at any stage throughout the period of study you feel that the standard of supervision you are receiving is inadequate or you have been unable to establish an effective working relationship with a Supervisor/Supervisory Team, these issues should first be raised with the Supervisory Team, Director of Postgraduate Studies / or Head of Academic Unit. If it has not been possible to resolve these difficulties, a PGR student should contact the relevant Graduate School or Dean of Postgraduate Research for advice. A PGR student may also consult directly with the Graduate School, the Faculty's Postgraduate Tutor, or Dean of Postgraduate Research in confidence, without delay. The APR also provides a PGR student with an opportunity to raise any issues. If there are any issues a PGR student wishes to discuss, but not include in the progression report, the relevant Graduate School can be consulted in confidence for advice.

12. If at any stage throughout the period of study the Supervisory Team feel that your progress is unsatisfactory or that the standard of work generally is below that expected, they should inform you in writing of the reasons for this opinion and you shall be given the opportunity of an interview with the Supervisory Team. Following this notice and any interview, the Supervisory Team may decide to monitor progress and/or attendance; additionally, or alternatively, the Supervisory Team may require the submission of written work in addition to that already prescribed by their project proposal and plan. If your progress has not improved within the agreed period, the Supervisory Team shall notify the Head of Academic Unit and submit a report for review by an impartial APR Panel. The APR Panel will make a report to the Dean of Postgraduate Research on the PGR CoP system. Alternatively, following the written notice and any interview, the Supervisory Team may immediately notify the Head of Academic Unit and submit a report for review by the APR Panel.

13. From time to time it will be necessary to deal with supervisory changes where colleagues are no longer available, though normally staff on study leave will continue their supervisory duties. Where it becomes impossible for an Academic Unit to continue to provide direct supervision – for example because of the departure of the only member of staff able to supervise a particular topic – the matter should be drawn to the attention of the Head of Academic Unit or Director of Postgraduate Study. You should be consulted about any changes, and alternative supervisory arrangements should be put in place in good time and the Graduate School informed so that formal approval may be sought from the appropriate Dean of Postgraduate Research.

14. You are required to maintain [high standards of academic conduct](#) and to avoid conduct amounting to the fabrication of research results or plagiarism.

- a) The fabrication of research results includes: claims, which cannot reasonably be justified, to have obtained specific or general results; false claims in relation to experiments, interviews, procedures or any other research activity; and the omission of statements in relation to data, results, experiments, interviews or procedures, where such omission cannot reasonably be justified.
- b) Plagiarism is the unacknowledged use of another person's ideas, words, or work. At one extreme, plagiarism is simply a form of cheating, such as where the whole or a significant part of work submitted towards an examination or degree is the unacknowledged work of another, copied slavishly from a book, research paper or electronic sources such as the internet. At the other extreme, plagiarism may occur accidentally, through poor standards of scholarship, or may concern insignificant parts of submitted work.
- c) If you are unclear as to what use may be made of the work of others in the field without raising concerns about plagiarism, then you should consult your Supervisory Team. In most cases, the adoption of appropriate standards of scholarship will avoid such concerns. The following general guidelines may assist (along with further guidance on [Good Academic](#)

Practice):

- i. Passages copied verbatim from the work of another must be enclosed in quotation marks. A full reference to the original source must be provided. The substitution of a few words in an otherwise verbatim passage will not obviate the need to use quotation marks and to provide a full reference.
- ii. You must always give due acknowledgement to the sources of ideas or data which are not their own and are not truly in the public domain (for example, because they are novel or controversial) or are not widely held or widely recognized.
- iii. Ideas and data which are your own or are truly in the public domain may be included without attribution but should be expressed in your own words.
- iv. You must take care to distinguish between your own ideas or work and those of others. Any ambiguity in such a distinction could give rise to a suspicion of plagiarism.
- v. Where your work is the result of collaborative research, you must take care to acknowledge the source of data, analysis or procedures which are not your own.

15. The retention of accurate and contemporaneous records of primary experimental data and results is of the utmost importance for the progress of academic enquiry. You should maintain these records in a form that will provide clear and unambiguous answers to questions concerning the validity of the data or the conduct of the work that might arise at a later date. Such questions can arise during the course of subsequent investigations by you, colleagues, and others; accurate contemporaneous records are invaluable when this happens. In addition, errors detected following publication of experimental or other research results could be mistaken for misconduct if you cannot provide an accurate record of the primary data. It is important that you and your work are protected from such misunderstanding.

The following guidelines will assist you in this regard:

- a) [Research data management policy](#) and code of good practice
- b) Records of primary experimental data and results should always be made using indelible materials. Pencils or other easily erasable materials must not be used. Where primary research data and results are recorded on audio or video tape (e.g., interviews), the tape housing should be labeled as set out in (d) below.
- c) Complete and accurate records of experimental data and results should be made on the day they are obtained, and the date should be indicated clearly in the record. When possible, records should be made in a hard-backed, bound notebook in which the pages have been numbered consecutively.
- d) Pages should never be removed from notebooks containing records of research data. If any alterations are made to records at a later date, they should be noted clearly as such, and the date of the alteration should be indicated.
- e) Machine printouts, photographs, tapes, and other such records should always be labeled with the date and with an identifying reference number. This reference number should be clearly recorded in the notebook referred to above, along with other relevant details, on the day the record is obtained. If possible, printouts, photographs, tapes, and other such record should be affixed to the notebook. When this is not possible (e.g., for reasons of size or bulk), such records should be maintained in a secure location in the University for future reference. When a 'hard copy' of computer-generated primary data is not practicable, the data should be maintained in two separate locations within the University, on disk, tape, or another format.
- f) When photographs and other such records have been affixed to the notebook, their removal at a later date for the purpose of preparing copies or figures for a thesis or other publication should be avoided. If likely to be needed, two copies of such records should be made on the day the record is generated. If this is not practicable, then the reason for removing the original copy and the date on which this is done should be recorded in the notebook, together with a replacement copy or the original if this can be re-affixed to the notebook.
- g) Custody of all original records of primary research data must be retained by the principal investigator, who will normally be the supervisor of the research group, laboratory, or other forum in which the research is conducted. An investigator may make copies of the primary records for their own use, but the original records should not be removed from the custody of the principal investigator. The principal investigator is responsible for the preservation of these records for as long as there is any reasonable need to refer to them, and in any event for a minimum period of 10 years.

16. Your Supervisory Team will advise you on the thesis in general e.g. on content, presentation and organization, however, they will not act as a proofreader. While they may read all or part of the first draft of the thesis and offer advice, thereafter it is your responsibility to revise the thesis and to decide when to submit.

NOTE ON HEALTH AND SAFETY

17. Supervisory Teams are responsible for ensuring that you follow the agreed University, and where appropriate Academic Unit, safety policy and procedures. Full details of the University's safety policy are available on the University's Occupational Health and Safety Service (OHSS) webpages and from the Academic Unit's designated Safety Officer.



Introduction

The purpose of these guidelines is to assist you to reflect on good practice in studying for a research degree. The guidelines are not intended to be prescriptive or exhaustive, but an attempt to set out good practice in:

1. Establishing and maintaining a good relationship with your Supervisory Team
2. Approaching a research degree
3. Preparing for research
4. Where appropriate, choosing a topic
5. Producing an initial research proposal and plan
6. Writing regularly
7. Dealing with academic problems
8. Dealing with non-academic problems
9. Reviewing the progress of the research
10. Framing your thesis
11. Writing your thesis
12. Preparing for examination
13. Publishing, networking, and developing your career.

1. Establishing and Maintaining a Good Relationship with Your Supervisory Team

Your relationship with your Supervisory Team is crucial to the success of the research project, and you need to start it off well and maintain it over time. Starting off well involves:

- making an early appointment to see your Supervisory Team in the first few days after your arrival;
- being clear about your respective roles and responsibilities;
- establishing ground rules to govern your future relationship.

Until you have met with your Supervisory Team, it is not possible to even begin the preliminary work on the project. While it can sometimes seem that, with one, two, or three years stretching ahead, the matter is not urgent, in reality, the time soon passes, and it is vital to meet with your Supervisory Team as soon as possible.

At the initial meeting, your Supervisory Team will welcome you and spend some time discussing your respective roles in the relationship so that you both know what to expect of each other. In general terms, supervisory support can include:

- ♦ Assistance with the choice of topic;
- ♦ Critical and constructive feedback on the work produced;
- ♦ Advice on the sources or literature used;
- ♦ Guidance on the methodology or techniques used and the approach to data collection;
- ♦ Discussion of evidence and results;
- ♦ Reading drafts and commenting on issues of substance.

Supervisors will not:

- ♦ undertake the actual research itself
- ♦ write or significantly re-draft papers or chapters
- ♦ conduct a detailed proofread of the thesis

In pointing out that it is up to you to do these things, the Supervisory Team is being realistic; a research degree is an award for successfully completing a personal research project, and for that to be the case you have to do the research, write it up, and make sure that the spelling, grammar, and punctuation are correct.

There are different models of Supervisory Team within the University. In joint supervision, the supervisory responsibilities are shared equally between members of the Supervisory Team. In other styles of supervision, different members of the Supervisory Team may have different roles. There may be, for example, a lead supervisor and a co-supervisor responsible for a smaller element of the planned research; or a lead supervisor and an advisor responsible for, and able to deal with, general and pastoral responsibilities. Since arrangements may vary the Supervisory Team must agree a clear distribution of responsibilities at the outset of the research and update this if arrangements change. It is important for the student to be

aware of who will 'lead' on which aspects of the research project.

As well as having clear expectations about your respective roles, it is also important that you and your Supervisory Team discuss ground rules for working together. These might be as below:

You agree to:

- ◆ turn up on time for supervisions and give as much notice as possible of cancellations
- ◆ be properly prepared for your supervisions
- ◆ write regularly and share the draft materials/creative practice output
- ◆ maintain the highest standards of academic conduct, as set out in section 14 of the University's *Guidelines for Research Students and Supervisors*
- ◆ maintain regular contact with your Supervisory Team, particularly when studying outside the University
- ◆ undertake the tasks agreed to the best of your ability within the allotted time

Your Supervisory Team agree to:

- ◆ hold regular supervisions and give as much notice as possible of cancellations
- ◆ review promptly work or creative outputs
- ◆ provide written feedback

All of you agree to:

- ◆ treat supervision in a professional way with an agenda/agreed structure
- ◆ keep records of supervisions detailing what was discussed, what targets were agreed, and when they were to be achieved by, ideally in NU Reflect

Of course, the relationship with your Supervisory Team has to be worked at and maintained over time. In the early days, you are likely to be heavily dependent upon your Supervisory Team as you begin to find your feet in research. Once you have found your feet, your Supervisory Team will expect you to become more independent, and your relationship should develop into a dialogue in which you engage in academic debate on a basis of increasing equality. By the time you are nearing completion, you will come to know more about the work than your Supervisory Team but will still be dependent upon their expertise to advise whether the research project has reached the stage at which it should be submitted for the degree or whether further research and/or re-writing is required.

It happens that, occasionally, what should be the natural transition from dependence to relative independence does not transpire, either because the student remains over-dependent upon the supervisors, or the latter is unwilling to 'let go'. Because of these possibilities, it is useful, over the course of a research degree, for you and your Supervisory Team to discuss your evolving relationship at regular intervals. This gives the Supervisory Team a chance to flag to you that they think that you are more than ready to spread your wings and fly alone, or you the chance to ask for more space to take the research in your preferred direction.

Very rarely, research students find that they are unable to work effectively with their supervisors, and the relationship is in danger of breaking down. (See Section 11 of the Guidelines for Research Students and Supervisors for more information.)

Reviewing Practice

- Are you clear about what you can expect of your Supervisory Team and what they can expect from you?
- Have you established ground rules for your future professional relationship?
- Do you have arrangements for regularly reviewing your relationship with your Supervisory Teams?

2. Approaching a Research Degree

In order to be awarded a research degree, you have to satisfy the examiners that you have fulfilled the requirements for that degree as laid down in the University's regulations and as applied in your own subject. It is vital that, at the very start of your studies, you are aware of what those requirements are to avoid latter errors. It is therefore worth spending some time looking at what will be the end product of your studies. Your starting point should be to carefully read the University's Regulations and Code of Practice for Research Degree Programmes (and where appropriate any specific programme regulations) and, preferably, discuss these with your Supervisory Team so that you have a clear idea of what they mean.

While all research degrees have to meet the University (and where appropriate any specific programme requirements) they

do this in very different ways, depending upon the discipline in which they are undertaken. It is therefore vital that you also have a clear understanding of what the relevant research dissertation or thesis in your discipline is like at the start of your studies. Your Supervisory Team should recommend you look at a couple of theses in the same or in cognate areas to your own, and you would be well advised to do this and discuss key issues – for example in the case of PhD theses what made them original or how much of the thesis was publishable – in a supervision.

3. Preparing for Research

Research can be a difficult and frustrating process but you can minimize, if not eliminate, the frustrations of research by thorough preparation at the start by being familiar with:

- Resources available to support your research, both material and human. The former includes the library, centrally and locally provided computing facilities, and any specialized equipment needed for your project; the latter includes academic staff and fellow researchers and research students in your Academic Unit. You will be provided with opportunities to attend induction sessions relating to all these resources, and it is vital that you take advantage and make sure that you know what is available, how to access them, and how to use them in ways that are conducive to the health, safety, and welfare both of yourself and others. In the latter context, you should read about the University's Health and Safety Policy and the relevant Academic Unit health and safety policy and, if appropriate discuss this with your Supervisory Team.
- What is involved in the research process and with good practice in doing research in your field, including the ethical issues that should be addressed. You must find out about the research training programme and attend; this is your opportunity to be informed about what is involved in research in your discipline by academic staff who are not only knowledgeable about the processes of research but also about the practice. As well as attending faculty events and, where appropriate, training programmes in your Academic Unit, you will also find it helpful to read through one or more of the general texts about research or ones relating to specific disciplines where your Supervisory Team may be able to help with references.

You also need to be well-organized personally in terms of time, working conditions, and research materials:

- Time - if you are a full-time postgraduate research student you probably have more control over how you spend your time than at any other period in your working life. If, for this reason, time management is vital to full-time students, this is even more the case with part-time ones who may well be combining a job and/or a family with their research. For this reason, it is well-worth adopting explicit time management techniques.
- Working conditions - the demands of research are, or can be, very intense, and you need an appropriate working environment in which you can read, reflect, think, evaluate, and write. You need to establish what facilities are available in your Academic Unit or, if you undertake work at home, create a suitable space.
- Research materials - this covers both data and results generated during the research and sources such as books, articles, papers, and other theses.
 - Data and results and the outcome of practice-led research, particularly in experimental research - it is of the utmost importance that these are recorded and maintained in such a way that they can vouch for the accuracy and authenticity of your research. You must read, and follow to the letter, the University's requirements for the retention and storage of data as set out in Section 15 of its *Guidelines for Research Students and Supervisors*. Other sources - it is important that you index and store them so that they are immediately accessible when needed – there is nothing more frustrating than being in full flow writing up a piece of work and then being unable to find the source for that seminal point which, you have just realized, will tie the chapter together. You should assume that anything that you read may well find its way into the dissertation or thesis, take full details of the reference (preferably in a database organized in terms of whichever referencing system you will use for the final work), and put any materials into a filing system with an index which makes it easy to retrieve.
 - Where data and or sources are stored electronically, they must be backed up with a second copy kept in another place. Research can be frustrating enough without losing weeks or sometimes months of work through failure to back up a file.

Reflecting on Practice

- Are you fully aware of the range of resources available to support your research project? Have you developed the skills to use them effectively?
- Are you aware of health, safety, and welfare policies?
- Do you understand what is entailed in the research process in your subject?

- Are you managing your time effectively?
- Do you have adequate facilities for your research?
- Do your arrangements for retaining and storing data meet the University's requirements?
- Have you organized your references and sources so that you can access them quickly?
- Do you regularly back up your work?
- Do you keep the copies in another place? Are you keeping records of and or documenting practice-led outputs?

4. Choosing a Topic

In many cases, and particularly in engineering and the sciences, students are often recruited to research a particular topic which has been pre-defined by the Supervisory Team. But, occasionally in these fields and frequently in others, students are recruited on the basis of their interest in working in a broadly defined area of the subject, which has to be narrowed down sooner or later to a specific topic. This can be a difficult time, as you can spend valuable time searching for a niche and then, when you think that you have found one, the topic turns out to be far too ambitious. So, you find yourself thrashing around in a seeming intellectual vacuum again, and so it goes on.

It is important to remember that this is by no means abnormal and you should receive strong support at this stage from your Supervisory Team. What they might do (or what you can do yourself) is to take an apparently promising project and subject it to the six key tests:

- Is it worth doing?
- In principle, could it be done?
- Could it be done within the time available?
- Do you have, or could you acquire, the knowledge and skills to do it within that time?
- Would it sustain your interest?
- If you did complete it successfully, would it meet the requirements for the research degree?

It may take several iterations before both you and your Supervisory Team are confident that you have a topic which will meet these key tests, and which will give you a starting point for your research. It should, however, be noted that it is only a starting point; as the research develops it may change, and the final topic may be different from that with which you started out. This is by no means abnormal, but it is important, in consultation with your Supervisory Team, to keep track of the evolution of the topic and ensure that the result will still pass the six tests.

Reflecting on Practice

- Does your topic fulfil the six tests set out above?
- Have you discussed this with your supervisors?
- If it has changed, does the revised topic still meet the tests?

5. Producing your Research Proposal and Plan for Project Approval

It is a requirement of the University's *Code of Practice for Research Degree Programmes* that you should, in conjunction with your Supervisory Team, produce and agree your research proposal and plan for formal Project Approval within the first three months (full-time students) or first six months (part-time students) of registering on your research degree programme. The project proposal, plan and Supervisory Team will be considered by an impartial Project Approval Panel, and then the Head of Academic Unit, prior to formal approval by the Dean of Postgraduate Research.

In some cases, the research proposal may have been pre-approved (e.g., in a UKRI application), but it should still be submitted together with a project plan and confirmed Supervisory Team arrangements to the Project Approval Panel to ensure the project is achievable within the timescales allowed and to confirm that sufficient resources are available within your Academic Unit.

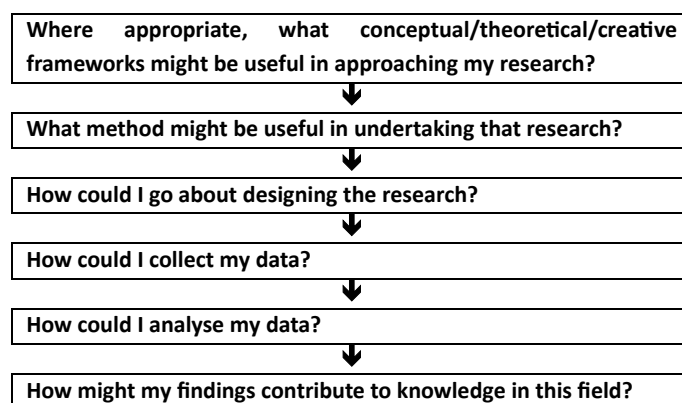
At their simplest, research proposals and plans set out what research students are proposing to do in their research projects, and when they are proposing to do it by. With regard to a research proposal, a simple guide to drafting one might be to try and address the eight key questions of:

What is the topic of my research?



What have others written/created on this topic?





In addition, there may be specific guidelines from your Academic Unit and/or your Supervisory Team which should be followed when writing a research proposal. The draft proposal should then be shown to, and discussed with, your Supervisory Team and amended in accordance with their comments before submitting your research proposal and plan for formal Project Approval.

With regard to an initial research plan, this involves unpacking what the tasks will be and assigning target time values to them which will enable you to complete on time. So, for example, for a three-year PhD in the social sciences, the initial research plan could be as below:

Month	Research tasks	Writing tasks
1	Reading around the research topic	Mini-reports on aspects of the research topic – identify a possible academic contribution
2	Narrowing down the research questions	Short-list of questions
3	Obtain Project Approval	Outline research proposal and plan/timetable
4-5	More detailed scoping and reviewing of literature	Literature evaluation
6	Reading on concepts, methods, and techniques	
7	Finalising concepts, methods, and techniques to be applied	Full research design
8	Preparation of pilot study (if relevant)	
9	Administration of pilot	
10-11	Preparation of main study	Evaluation of pilot study
12-24	Data collection	Field work reports
	Data coding	Reports
	Data analysis	Analytical reports
	Data interpretation	Preliminary conclusions
25-31	Reworking previous chapters of thesis	
32		First full draft of thesis
31-34		Revised draft of thesis
36	Submit	

Once you have an initial research plan, then it is important to discuss it with your Supervisory Team, check that it is realistic in terms of the allocation of time to task, and if necessary, amend it.

It should be stressed that, as with the topic, both the initial research proposal and the plan may well be subject to change over the course of the research as the focus perhaps changes as do activities and in consequence the timings. This is normal and not, in itself, a cause for concern – the proposal and the plan are intended as a flexible framework and not as a cage. But it is important that, at regular intervals during the research project, you and your Supervisory Team review the proposal and the plan and update them to reflect the evolution of the research project. This should help you to keep track of where the project has been and where it is going and, most crucially, whether you may need to step up a gear to keep the project to time.

Reflecting on Practice

- Have you, in conjunction with your Supervisory Team, agreed an initial research proposal and a research plan?
- Do you review them regularly with a view to updating them and keeping the research project on track?

6. Writing Regularly

As you begin to make progress with your research, you should commence writing as soon as possible for four reasons:

- It enables you to keep a record of what you have done from the start to serve as a basis for later work.
- It encourages you to reflect on what you have done so far and think about where you will go from here.
- It gives your Supervisory Team the chance to see what you have done, and to advise you about how to proceed. This is crucial, and it is a University requirement that research students following programmes of more than one year of study should produce at least one substantial piece of written or creative work in their first year.
- It gets you into the discipline of academic writing at an early stage rather than leaving it until later when it is more difficult to acquire.

But, in some cases, students are reluctant to produce written work, which may be due to a lack of experience of writing regularly at all, or of producing academic writing with its demands of precision, clarity, organization, and explicit structure. The other factor is confidence as a research student your writing becomes, or should become, a presentation of your own views, ideas, thoughts, etc. This can leave students feeling very exposed and, particularly if their standard is published work, very dissatisfied with what they have achieved. For these reasons, they may be psychologically reluctant to write.

One way of ensuring that you write regularly could be to keep a research diary on a daily basis recording what you have done, time spent on it, analysis, and speculation. This gets you into the habit of writing regularly, recording, and reflecting, and can provide a useful basis upon which to construct longer pieces of work.

In constructing longer pieces, you can make the task more manageable by breaking it up into smaller ones. So, initially, you might write a one-page abstract of the chapter setting out its aim (purpose), content (what it would cover), and possible conclusions (what it would add). With that thought through and discussed, the next stage would be to write a synopsis fleshing out the abstract and setting out headings and sub-headings to be used. Then, with a framework established, you can fill it in piece by piece until you have a draft chapter.

In order to improve your academic writing, you can read books on the subject, ask your Supervisory Team for examples of such writing from the literature in the field, or even pair up with another research student who will undertake to read drafts and suggest improvements in return for similar support from you for their efforts.

In terms of overcoming psychological reluctance to write, you can 'free-write', i.e., write it down as it comes without any attempt to structure or present it for an academic audience. This takes the pressure off you and although, at the time, you may feel that it is worthless, you can be surprised to return to it later and find that it does take you forward.

Additionally, and provided that you warn your Supervisory Team beforehand that it is a free-written draft, it can be useful to show it to your Supervisory Team and gain some feedback. Supervisory Teams are aware from their own experiences that virtually all research starts-off very rough-hewn and will allow for this, and of course most would prefer a 'messy' draft of a chapter from you rather than nothing at all.

It may be noted that, while writing is a necessary task for all research students, it is inherently more difficult if your first language is not English and you have perhaps been educated within different styles of academic discourse. Your Supervisory Team may be able to assist by discussing examples of writing with you, your Faculty may offer a training programme and, [In-Sessional English language courses](#) are available, which can provide support with your academic writing in English.

Reviewing Practice

- Have you started writing as early as possible in the research project?
- Are you writing regularly?
- Are you showing your written work to your Supervisory Team?
- Would you find it useful to have some assistance with academic writing in English?

7. Dealing with Academic Problems

While you can be well prepared for research, it is frequently the case that, at some point during the project, you experience academic problems of one kind or another. Common ones include:

- ◆ **Drifting from the topic**
As the research progresses, avenues of new exploration open up which just have to be investigated because they could be vital. So, you become lost in the maze of possibilities and unable to establish where you should be at that stage of the project.
- ◆ **Difficulties with the methodology/methods**
Particularly in the arts and humanities and social science, the section of your thesis on methodology/methods can require you to grapple with a whole range of unfamiliar philosophical, theoretical, empirical and experimental problems, and it can be frustrating to try and identify, tackle, and resolve these, particularly when you want to undertake the substantive research.
- ◆ **Problems with the substantive research**
You can expect a range of problems to occur as you undertake the substantive research – evidence that you are unable to obtain as easily as you hoped, experiments that do not work, apparently promising lines of enquiry which turn out to be dead ends, simulations which do not run properly – the list is endless.
- ◆ **Drowning in data**
You collect masses and masses of data, start playing around with them, and find all sorts of interesting things that can be investigated in and around the topic and then even outside it. As a result, you are unable to discriminate between what to concentrate upon in your research project and what to leave out.
- ◆ **Unexpected results**
With the substantive research accomplished, you find results which you did not expect – the evidence which is contradictory, the experiments which yield negative results, the cast-iron assumptions which are apparently falsified, the simulation results which defy predictions, variables which behave badly etc.

If you hit problems of these kinds or others, it is important you are not afraid to admit, not least to yourself, that you are in difficulty. Research students tend to have previously sailed easily through undergraduate and taught postgraduate programmes and it can be a shock to be brought shuddering to a halt while engaging in research. If you have problems, you should acknowledge them secure in the recognition that this happens at one time or another to all researchers and it is all part and parcel of doing research.

In terms of resolving problems, you might start by trying to think through how you can overcome them yourself. If you feel you are drifting aimlessly in terms of the topic, you might re-visit your research proposal and plan and re-assert the initial focus of the research; if methodology is a problem, look at other books or theses in the area for models of how to proceed; if one avenue of the substantive research has been blocked off, look for another; if you are drowning in data again go back to the research proposal and plan to re-focus the analysis; for unexpected results, see if there is a substantive explanation – many important contributions to knowledge have come from the explanation of apparent inconsistencies.

You may also wish to consider sharing the problem with a fellow-research student, particularly perhaps one who is further on in their studies and who may be able to offer advice based on their own experience. Some Academic Units encourage such a collective approach to problem solving by pairing research students so that they can support each other. Alternatively, if you are part of a research group, it may be that one of your colleagues can assist.

You should, of course, ask for assistance from your Supervisory Team. As experienced researchers, they will be familiar with the problems of research both generally and in the specific subject area and should at least be able to help you to think through the problem and to suggest ways you might go about resolving it.

Reflecting on Practice

- What academic problems might you expect to meet during your research project?
- How would you go about resolving them?
- What sources of support are available to help you resolve academic difficulties?

8. Dealing with Non-Academic Problems

As well as experiencing academic problems of one kind or another, you may also experience a range of non-academic problems arising from your situation. Three common ones are self-doubt, isolation, and boredom:

Self Doubt - You may, particularly in the early stages of a research degree, experience bouts of self-doubt which often takes the form of anxiety about whether you will be able to make a successful transition from being primarily an absorber of, to being a contributor to knowledge, and it can be associated with a reluctance to write or at least to submit written work to your supervisors in case it is 'not good enough'.

It is worth noting that such self-doubt is not uncommon, and that dealing with it is part and parcel of the experience of being a research student. In terms of how to deal with it, the key thing is to write or make – no matter how mundane you think that the piece or chapter is – and show the work to your Supervisory Team. While you are, of course, bound up in the research, and are often unable to judge the contribution that you are making – in time even the most original insights come to seem commonplace to their creators – your Supervisory Team have a greater degree of objectivity. They are far better placed to ascertain how you are progressing, and to offer guidance and support for your work.

Isolation - at school and as an undergraduate or postgraduate, you study a common syllabus in the company of your peers. But, as a postgraduate research student, unless you are working on a group project or in a large and active research group, you will find yourself working on your own project and often without the company of others. This can lead to intellectual isolation – you are the only one in the world working on this topic and may feel social isolation as you plod away on your own in the library or the laboratory.

Boredom - This tends to happen when you are well into your research, where you are producing work day after day, and you become bored with the whole thing and ripe for distractions which will take your mind. There is no simple neat solution to this problem – if you want to complete you have to continue the research – but it can be beneficial to either do something else (write or re-write an earlier chapter) or even, with the approval of your Supervisory Team, take a short break.

While these, of course, are non-academic problems arising out of being a research student, you may encounter other difficulties of a personal, social, and financial character that have a bearing upon your research. You should certainly alert your Supervisory Team to any such difficulties that you may be experiencing, or if you feel this is inappropriate, then you also have access to the full range of University support services outlined in Part One of this Handbook, who can signpost you to relevant support.

9. Reviewing the Progress of the Research

One of your key tasks as a research student is to review the progress of your research. This involves variously self-review, formal reviews with your Supervisory Team, and participating in Academic Unit and University review procedures.

Research students are under considerable pressure variously from sponsors, the University, and Academic Units to complete their degrees within the allotted time. Your chances of completing on time or as near as possible will be significantly enhanced if you treat the research as a project and actively manage it to meet the deadline. The skills you need to do this may well be imparted in your Faculty research training programme.

Either way, you should find that one of the critical recommendations is to treat your research plan not as an exercise to be completed at the start of the project and then filed away, but as a 'live' document to be reviewed and updated frequently and regularly over the duration of the project. You should consult it regularly; update it in the light of your progress to date; consider the implications for the completion of the research; and, as far as possible, act to keep the project on track. It may be noted that such self-review will not only help you to finish your research degree as soon as possible, but also enhance your project management skills and your attractiveness to employers.

As well as self-review, the University requires that you also formally review your progress with your full Supervisory Team at least once per academic year, normally in advance of your Annual Progress Review. It is important that you treat these supervisions in a professional way as an opportunity to discuss the progress of your research with your Supervisory Team and that you keep a record of what was discussed and what action points were identified.

As well as the Student and Supervisory Team report on progress submitted through the PGR CoP System, Annual Progress Reviews will also have formal requirements, usually involving the submission and/or presentation of pieces of work as part

of the progress review. It is worth noting that, while these review procedures are intended to assure the University that your progress is satisfactory, they are also intended to be helpful to you. They give you the opportunity to gain feedback on your work from outside your Supervisory Team, from your APR Panel who are experienced researchers themselves.

Reflecting on Practice

- Do you have a strategy for personally reviewing the progress of your research project at regular intervals?
- Do you approach supervisions to review your progress in a business-like way?

10. Framing Your Thesis

After spending the best part of one, two or three years of your life training to do research and then undertaking the actual research for your project, you are then faced with what is the last major task of producing your thesis. This task is absolutely crucial as it is the culmination of your research project and this, of course, raises the question of 'what is a thesis?' While there is no objective definition of a thesis and there are variations between what is expected in different disciplines.

Producing your thesis involves more than throwing everything you have done into the pot and hoping for the best; it has to involve a case or point of view and be substantiated with reasoned argument and evidence. This can be difficult to do because, to put it at its simplest, often we cannot see the wood (the thesis) for the trees (the mass of writings creative work and materials we have accumulated over the course of the research). So, in order to produce a thesis, we need to know the shape of the wood, i.e., a framework for our thesis.

There are many ways of developing a framework for your thesis, and it is worth consulting your Supervisory Team about suitable approaches. A practice-based PhD student should consult subject-specific guidelines as there is a different relationship between the creative work and the critical, contextual writing (written element) than there is in a traditional PhD by thesis. One possibility suggested in the literature (see for example Cryer 2000; Taylor 2002) is for you to think of yourself as an explorer who has undertaken a journey and who is writing a guidebook. As the author of the guidebook, you need to explain:

- where you started from
- what other guidebooks you read
- why you decided to undertake the journey
- how you decided to approach the journey
- the route you decided to follow for the Doctoral degree
- the original discoveries you made on the way
- where you arrived at the end of the journey
- how it differed from the starting point
- where you would go from here in future

You can literally map this on a couple of sides of paper, and then re-trace the journey. At each stage you need to ask the questions; What is it vital to say to take the reader on to the next stage?; What it is important but not vital?; What is neither important nor vital? By this process, if necessary, repeated several times, you should be able to distil the essence of the thesis (the vital) and separate it from the important and the relatively unimportant.

With, hopefully, a stripped-down and clear route, you can then begin to fill in each stage of the journey in terms of key topics which you have to address, which you use to flesh out your map. You can then apply the same tests as above – are they vital, important, or neither – and go through a similar iterative process. Then, within the topics, this can be repeated with sub-topics until, eventually, you have a complete map of the thesis.

Such an approach has a number of advantages. Firstly, it gives you an overall framework for your thesis; secondly, it divides the writing into manageable tasks; thirdly, and vitally, it can be discussed with your Supervisory Team before writing up; fourthly it highlights the key things you need to bring out in terms of discoveries (originality), added knowledge and understanding (the differences between the start and end point), and future research in the area (where we go from here); and finally may translate into the structure for a thesis. So, for example, in the case of many PhDs, the translation is:

<u>'Journey'</u>		<u>Thesis</u>
Starting point	-	Introduction
Guidebooks	-	Literature review

Reasons	-	Trigger
Approach	-	Methodology
Route and discoveries	-	Substantive research chapters
Arrival	-	Analysis and results
Differences	-	Added knowledge
Future	-	Directions of research

11. Writing Your Thesis

Once you have established a basic framework, you still, of course, have to write the thesis. Here the three key issues to consider are; who am I writing for? (audience); how do I actually go about writing it? (drafting); how do I make sure that it reads well? (presentation). A research thesis, like any other piece of writing, is a form of communication, and it is necessary to consider in advance the audience that you are addressing and how you might meet their needs.

So, for your examiners, the thesis needs to be:

- (i) well-structured
- (ii) argued coherently
- (iii) relevant
- (iv) concise in the literature review
- (v) expansive and detailed on areas in which the thesis makes a significant and original contribution to knowledge.

Clearly (i) to (iv) above apply to all research degrees, while (v) applies particularly to Doctoral degrees.

(i) and (iii) above clearly have a bearing on what you write;

(ii) has a bearing on what you include when you write, and

(iv) and (v) have a bearing on the proportion of the thesis taken up by each heading.

So, for example for Doctoral degrees, you should certainly not aim for half of your thesis to be taken up by the literature review, a further quarter by the methodology, and only a quarter for the original scholarship.

What it can be useful to do is to produce a rough distribution of how much should be devoted to what part of the thesis. While the percentages may vary in different cases, it is crucial to plan them with the needs of the audience in mind.

Such a distribution, produced by the University of Warwick as a guideline for PhD students (cited Blaxter *et al.* 1996* p 217) are set out below:

	% of thesis
Introduction	10
Literature review	20
Methodology	15
Research findings	20
Discussion	20
Conclusions	5
Bibliography	10

With the needs of your audience in mind, it is then possible to proceed to drafting. One of the (few) common factors in the research degree experience is that it almost always takes far longer to write up the thesis than had been planned. The reason for this is that, when we finally write up, we have finished the substance of the project and now have, or should have, the benefit of hindsight, which leads us to change, amend, and modify the draft. While this is an entirely legitimate and valuable part of a research degree – it is in fact learning from what we have done – it can result in considerable delays in producing a first rough draft.

You should then review this yourself. Here it can be very useful to look at the [*Handbook for the Examiners of Research Degrees*](#), which sets out the criteria the Examiners will apply to your thesis. You should apply these then, if necessary, re-draft the thesis and ask your Supervisory Team for comments. Following that, you should re-draft in the light of their comments, review it again yourself, and so the cycle continues until a final draft emerges.

As well as meeting requirements for the substance of the research degree, it is also vital that the draft is well-presented, for

two reasons. Firstly, while good presentation cannot rescue a poor thesis, it may help a marginal one, i.e., the examiners may be inclined to take a more charitable view if the thesis is easily readable and as far as possible, error-free. Secondly, inadequacies in expression and errors in spelling and grammar are one of the most common reasons for the referral of theses, i.e., for these being accepted subject to minor corrections. It can be extremely galling to have to spend a month or two correcting elementary mistakes and errors, not just to you but to your internal examiner who will be landed with the task of checking that your errors have been corrected before the degree can be awarded. **It is important that you get this right before you go further.**

You should:

- ensure that you have expressed yourself as clearly and concisely as possible (reading out loud can often help to identify over-long sentences and unnecessary padding)
- check the grammar and the spelling (it is your responsibility to do this and not that of your Supervisory Team)
- check that you have the right words (spell checkers can tell you whether the word is spelled correctly but not if it is the right word in the first place)
- check the footnotes/endnotes, quotations, citations etc. both in the text and in the bibliography (remember, your examiners will check a sample)

Given that many of us can be blind to our own deficiencies and errors, it can be very helpful to ask a friend with some expertise in the area to comment on the comprehensibility of the draft and to also ask them to check it for errors.

With this done, it is back to your Supervisory Team for a final re-read and, hopefully, the green light to go ahead and submit the thesis for examination. If your Supervisory Team still have reservations, you can still submit – ultimately it is your decision – but you would be well advised to consider this very carefully for fear of falling at the final fence.

In preparation for submission, you should check the University's Degree Assessment Regulations and thesis submission guidelines on the [Examination Overview webpage](#).

Reviewing Practice

- Are you clear about the audience for which you are writing?
- Have you decided upon an appropriate balance between the lengths of the various parts of the thesis?
- Have you reviewed your thesis using the Handbook for Examiners?
- Has your Supervisory Team seen the draft?
- Have you taken their comments on board?
- Have you asked their advice about submission?
- Have you checked the University's requirements for thesis submission?

12. Preparing for Examination

Following submission of the final title of the thesis, examiners are appointed, normally one internal and one external examiner. In the case of Master's research degrees, the process of examination normally involves the assessment of the dissertation or thesis by the examiners and in the case of Doctoral and MPhil degrees, University regulations require an oral examination/viva.

Oral examinations are comparatively rare in undergraduate and taught postgraduate programmes; in most Universities, but, as indicated above they are compulsory for the award of the Doctoral and MPhil degrees at the University. The implication of this is, of course, that as a research student starting a research degree, you may often have little or no experience of oral examinations. While you may gain some by defending your work at annual progress reviews, this is still a far cry from the full rigour of a formal oral examination.

This might be of little consequence if, as in many other European countries, the oral examination was a public affair, and they could go along and experience what happened. However, the British oral examination rarely gives access to people other than the examiners. Again, this might not matter if there were published guidelines for the oral examination, but this is not always the case.

However, you can prepare for your oral examination in six main ways.

1. It is important to understand what oral examinations are about, i.e., their purposes, procedures, and outcomes. These

are explained in detail in the University's [Handbook for Examiners of Research Degrees](#) and you will find it helpful to discuss these with your Supervisory Team.

2. You need, of course, to be thoroughly familiar with your thesis. While this may seem strange since you wrote it, it is amazing how quickly you can forget what you have written, and you do need to re-read it. Often, you will find typos and other errors you have missed earlier – if so, list them and take them with you to the oral examination to show your examiners that you are aware of them.
3. You need to keep up to date with the literature/practice in your area in the hiatus between submission and the oral examination. If a key paper comes out during that period, your examiners may ask you about it and about any implications for your work, and it obviously creates a good impression if you are aware of it.
4. As well as being prepared for questions concerning new literature, it can also be useful to anticipate the sorts of questions you might be asked and at least think about how you will answer them. There are some fairly obvious general ones (e.g., 'Why did you do this topic?' 'Why did you study here?' 'What would you have done differently if you were doing the research now?' 'What do you think the implications of your work are for the field?') for which you can prepare.
5. You can ask your Supervisory Team to arrange a mock oral examination in which colleagues who are experienced in examining question you on key parts of the thesis and provide you with feedback upon your performance. Such an opportunity is invaluable in enabling you to prepare both intellectually and psychologically for what is to come.
6. On the day itself, you need to be prepared for the experience. You should attend the oral examination as well-rested and fed as possible, and appropriately attired – it is a formal occasion so you need to be well-dressed but as you will be sitting down for a couple of hours and possibly more you need to feel comfortable as well. You should ensure you have with you:
 - a copy of your thesis (preferably loose bound so you can find pages quickly)
 - pen and paper if you need to jot questions down or possibly draw diagrams
 - where appropriate, a list of corrections
 - copies of any original results, printouts, or raw data which may be helpful in substantiating key points made in the thesis

Your oral examination may take place in person, online, e.g., via Teams, or hybrid (where one or more attendees are online). You should be made aware of the format of your oral examination and the University has guidance for online oral examinations, which you may find useful to consult in Sections 4.6 to 4.12 of the [University's Handbook for Examiners of Research Degrees](#).

At the start of your oral examination, your Examiners will:

- introduce themselves
- explain the purpose of the oral examination is to provide you with an opportunity to defend your thesis in high-level debate with experts drawn from the relevant research community and will involve the Examiners asking questions about your work and supplementary questions based upon your answers.
- Explain about rest breaks
- Clarify that you may consult with your copy of your thesis throughout the oral examination.

When the examiners have finished their questions, they may well ask if there is anything you wish to say; this is an opportunity for you to clarify or expand upon any answer which you felt did not do you justice or raise any other matters concerning the examination. At the end of the oral examination, you will be asked to leave while the examiners deliberate, and afterwards you will normally be called back, to be informed of the examiners' recommendation.

In many cases, the recommendation will be to award the degree subject to making minor corrections (usually spelling and grammar) or minor revisions to the satisfaction of your internal examiner within six months. In some cases, the recommendation may be to make major changes and resubmit within twelve months. While this recommendation may be disappointing, it is important to remember that the examiners' expectation is still that you will eventually pass, and they are required to specify what you need to do to make the grade. Other outcomes, i.e., the award of a lower research degree or a fail, are mercifully rare. But, if this does happen and you have reason to believe that this relates to unfairness in the examination procedure, you have a right to appeal, and details of the University's Academic Appeals procedure are set out in Part Four of this Handbook.

In the vast majority of cases, you should only need to do one thing after the oral examination - celebrate.

13. Publishing, Exhibiting/Performing, Networking, and Developing Your Career

There are three other areas of good practice for research students, namely publishing, networking, and developing your career.

If at all possible, you should try and publish, exhibit/perform your work during your studies; this can help to mark out your academic territory, bring you into contact with others in the field, boost your self-esteem — it is a coup to be published when still a graduate student — and provide a better platform for employment, particularly in the research field inside or outside the universities. Your Supervisory Team should be able to advise you about whether your work should be published and, if so, how to go about it.

Also, you should consciously network within the academic and/or professional community relating to your field. Academia is heavily dependent upon networking informally and formally, in the latter case through professional associations and conferences. You should try and establish your own informal networks, and participate in the professional ones, e.g., the postgraduate sections of professional associations. Such networking will bring you into contact with others in the same field, help to prevent isolation, offer you opportunities to attend conferences and give papers, and finally enable you to acquire skills which will stand you in good stead in your career, inside or outside academia. Again, your Supervisory Team can help with contacts and advise on professional association memberships, etc.

Last, but by no means least, you should, from the beginning of your research project, be conscious of the need to develop skills and plan for your future career. Your primary objective as a research student is, of course, to gain a research degree, and this will be valuable in seeking employment. But, in today's labour market, you also need to have the key transferable skills which are demanded by employers. You should use your Personal Development Plan (PDP) to highlight areas of strengths and areas for improvement by mapping your current skills against the Vitae Researcher Development Framework.

You can learn about the skills demanded by employers, through attending training and development events organized by the University's [Careers Service](#) which can be used as a benchmark against which you can develop your skills over the course of your programme.

So, at the start of your programme, you should look at the list and see which skills you have acquired already and which you will need to acquire over the remainder of your studies. You should then check out which of these skills you will acquire by attending Researcher Development Programme events over the course of your research training and discuss with your Supervisory Team the other skills you will acquire by undertaking your research. You should then audit your skills and identify any gaps – a common one for research students particularly in the humanities and social sciences is team-working – and make plans to fill them. Your Supervisory Team will be of assistance in this regard, as will the postgraduate adviser in the Careers Service.

While all the key skills are important, it is worth highlighting the acquisition of one in particular, namely effective oral presentation skills. Such skills are vital in the academic context (a number of academic units ask research students to make oral presentations as part of progression requirements and of course you need them to make presentations to seminars and conferences) and for employment in virtually any field. You should take every opportunity to develop these skills through the Researcher Development Programme, by reading the relevant literature and by asking your Supervisory Team or other colleagues to listen to a mini-presentation and give you feedback.

As well as actually acquiring skills for employment, you also need to be able to document their acquisition, which can be done on NU Reflect. Either way, if you can demonstrate to employers that you have acquired the appropriate skills, this will greatly enhance your chances of gaining the good job, which you deserve for all of the work and effort you have put in over the course of your research degree.

Reviewing Practice

- Have you discussed possible opportunities for publications with your Supervisory Team?
- Have you taken steps to establish informal networks in your subject community?
- Have you joined the relevant subject associations?
- Have you attended Careers Service events on career planning and development?
- Have you reviewed your skills against the University's template?

- | |
|---|
| <ul style="list-style-type: none">• Have you made efforts to fill any gaps? |
|---|

Conclusions

Research degrees are unique in so far as, rather than working within a pre-established framework, you often have to create and always undertake and manage a project to its conclusion. This is not an easy task but, in so far as your research will advance and/or contribute to the sum of knowledge and understanding in your subject, a worthwhile one. Hopefully these guidelines have helped to unpack what you need to do to succeed in gaining a research degree, given you indicators of good practice, and assisted you to reflect upon your effectiveness as a research student.

References

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Good Practice in Research Supervision

Introduction

As a member of the academic staff at Newcastle, you will be an effective researcher; the aim of these guidelines is to assist you to reflect on good practice in supervising research students. Some of the matters covered do relate to University requirements, and this document should be read in conjunction with the University's [Code of Practice for Research Degree Programmes](#) which sets out the formal framework for research supervision.

The guidelines attempt to set out good practice in relation to fifteen key components of research supervision, namely:

1. Establishing and maintaining a professional relationship with the student
2. Helping to induct them into research
3. Where appropriate, assisting with the choice of a topic
4. Where appropriate, helping them devise a research proposal and plan
5. Supporting the initial stages of the research project
6. Encouraging students to write/make
7. Assisting with academic problems with the research
8. Assisting with personal and social problems affecting the research
9. Giving feedback and reviewing the progress of the research project
10. Monitoring the progress of the research
11. Advising on drafts of the thesis
12. Advising on submission
13. Assisting on preparation for examination
14. Assisting with career development, networking, and publication
15. Working with Supervisory Teams

1. Establishing and Maintaining a Professional Relationship with the Research Student

The relationship between a supervisor and a research student is a professional one, and it is vital that it is started off on an appropriate footing. Newcastle University approaches this by requiring supervisors and students to sign a Learning Agreement setting out the expectations of each other, as in the example below.

The **research student** agrees to:

- ◆ turn up on time for supervisions and give as much notice as possible of cancellations
- ◆ be properly prepared
- ◆ write regularly and share the draft materials
- ◆ maintain the highest standards of academic conduct, as set out in section 14 of the *Guidelines for Research Students and Supervisors*
- ◆ maintain contact
- ◆ undertake the tasks agreed to the best of their ability within the allotted time

The **research supervisors** agree to:

- ◆ hold regular supervisions and give as much notice as possible of cancellations
- ◆ review promptly submitted work or creative outputs
- ◆ give written feedback

Both agree to:

- ◆ treat supervision in a business-like way with an agenda
- ◆ keep records of supervisions detailing what was discussed, what targets were agreed, and when they were to be achieved by

In general terms, supervisory support can include:

- ◆ Assistance with the choice of topic;
- ◆ Critical and constructive feedback on the work produced;
- ◆ Advice on the sources or literature used;
- ◆ Guidance on the methodology or techniques used and the approach to data collection;
- ◆ Discussion of evidence and results;
- ◆ Reading drafts and commenting on issues of substance.

Supervisors will not:

- ◆ Undertake the actual research itself;
- ◆ Write or significantly redraft papers or chapters;
- ◆ Conduct a detailed proofread the thesis.

At this stage also, you may wish to make it clear in what circumstances you would or would not expect credit to be given in any publications arising from the research.

While this process of establishing a professional relationship is important for all students, it may be particularly helpful to international students, who may have culturally defined notions of what they can expect from their Supervisory Teams. As such, it can be useful to spend some time discussing a student's expectations of the roles of the Supervisory Team and of what you can offer in order to clarify the relationship. Such discussions should emphasise the additional support available to international students in the early stages of their research, as well as the need for them to take the initiative in undertaking and completing the research project.

By these means, clear expectations should be established for what is to come at the start of the research. But, as with any relationship, the supervisor-supervisee one changes, or should change, over time. Ideally, it should start as a master - apprentice relationship and end up as almost equal colleagues.

Clearly, this implies a process of development over the course of the supervision from the Supervisory Team playing a directive role and setting tasks for the student to do at the start towards encouraging the student to become an autonomous researcher and increasingly recognizing their capacity to make an independent contribution to knowledge and understanding in the subject. However, this does not happen automatically. Students may need to be weaned away from dependence upon their Supervisory Team, while the latter may need to adjust to the idea of the student abandoning the nest and beginning to fly on their own. So, it is important for the Supervisory Team to periodically check where the balance lies, whether it is appropriate for this stage of the research, and if not, what can be done to correct it.

Reflecting on Practice

- ◆ What methods do you use to establish a professional relationship with the student at the start of the programme?
- ◆ What is the appropriate balance between dependence and independence over the course of the programme?
- ◆ How often do you review that balance?
- ◆ What can you do if it is wrong?

2. Inducting Students into Research

Many students coming through to research will have undertaken short research projects either as undergraduates or as postgraduates and will be required to undertake training in research during their first year of study. However, while previous experience and the literature yield insights into research, they may not prepare students for it fully, in five respects.

1. Students are often still not fully aware of what they are letting themselves in for and may not fully understand what a PhD is.
2. A student may be unprepared for research due to the way in which it is written up in books and papers in journals, namely as a seamless progression from initial idea to an addition to knowledge and understanding. But what is published is only the visible part of the iceberg; the other nine-tenths – the ideas that were discarded, the investigations that ended up in blind alleys, the correlations that were in the wrong direction, the experiments that gave negative results, the sheer fluke that led to the substantive advance – rarely see the light of day. Here, the Supervisory Team has a key role in forewarning and forearming. This may take the form of directing a student towards accounts of research as it really happened, pairing them with students further down the line to discuss the problems they had experienced, or even self-disclosure by the Supervisory Teams. What can be useful is for the Supervisory Team to keep all of the materials relating to a particular research project from first scribbles to final paper, and take the student through the process, disasters as well as triumphs. Such exercises can prepare them for what is to come and can have the added bonus of demonstrating how to go about problem-solving in their subject.
3. A student may not be aware or fully aware of what is entailed in maintaining the highest standards of academic conduct in undertaking their research, in particular with regard to the fabrication of results or plagiarism. A few minutes spent discussing this with the student can be helpful, and it is recommended that this is done.
4. The Supervisory Team should spend some time at the start of the project discussing the storage and retention of research

data with their students. Failure to store and retain data can, at worst, mean that experiments etc. have to be replicated, at best that progress is halted until missing data is eventually found. In this context, it can also be useful to encourage a student right from the start to take full references for everything that they read in such a form that they can later be easily transferred to the text or the bibliography of their thesis. Again, this can save many hours hunting for page numbers etc. at the writing-up stage.

5. The Supervisory Team is responsible for ensuring that research students follow agreed University and, where appropriate, Academic Unit health and safety policies and procedures, and these should also form part of the student's induction into research. This is particularly important for international students.

Reflecting on Practice

- ◆ Do you ascertain at the start of the programme what the student knows about the degree they are about to embark upon?
- ◆ How do you make them aware?
- ◆ How do you alert the student to the trials and tribulations of research?
- ◆ How can you ensure that an international student has an adequate induction into research?

3. Assisting with the Choice of a Topic

In many cases, and particularly in engineering and the sciences, students are often recruited to research a particular topic which has been pre-defined by a supervisor. But, particularly in the arts, humanities and social sciences, students are recruited on the basis of their interest in working in a broadly defined area of the subject, which has to be narrowed down sooner or later to a specific topic.

Bright students who have sailed through their previous careers with effortless brilliance may have unrealistic expectations of what they can achieve in their research degrees. These can often be adjusted by asking them to look through the titles of MPhils or PhDs in their subjects which illustrate the narrowness of most (if not all) research topics. But even when they have abandoned seeking a cure for the common cold or a fundamental change in our interpretation of civilisation and adopted a more realistic project, they will still need help and guidance. Moses (1992, pp 11-12) has characterized the process of selecting a topic as involving the five stages of:

- (i) determining a general area of interest
- (ii) critically reviewing the literature
- (iii) identifying potential 'triggers' for projects
- (iv) evaluating their suitability, and
- (v) choosing at least a starting topic.

While the general area of interest should be known, a Supervisory Team can assist a student by disclosure – talking through their own experiences – and/or exercises designed to model the rest of the process. A student can be asked to read (say) a review article (which can provide valuable training in critical evaluation) and asked to identify a couple of possible 'triggers' for research projects. A supervision can then be devoted to discussing the key questions relating to suitability:

- is this topic worth doing?
- how, in principle, could it be done?
- could it be done within the time available?
- what additional knowledge and skills would be required to tackle it?
- would it sustain interest?
- if completed, how might it meet the requirements for the award?

With, hopefully, an understanding of the criteria, a student can then be asked to do this 'for real' and write brief reports, upon which the Supervisory Team can give oral or written feedback. Eventually, this iterative process should lead to the identification of a topic which will, at least, form a focus for starting the research.

Reflecting on Practice

- ◆ Do you provide students with a framework for choosing a topic?
- ◆ Would disclosure of your own experiences be helpful?
- ◆ Can you identify review papers in your subject which could be used to generate topics for exercises?

4. Producing the Research Proposal and Plan for Project Approval

It is a requirement of the University's *Code of Practice for Research Degree Programmes* that research students should, in conjunction with their Supervisory Team, produce and agree their research proposal and plan for formal project approval within the first three months of their research degree studies. The project proposal, plan and supervisory team will be considered by an impartial Project Approval Panel, and then the Head of Academic Unit prior to formal approval by the Dean of Postgraduate Research.

In cases, where a student is recruited to implement a pre-determined research project, the project plan and confirmed Supervisory Team arrangements must still be submitted to the Project Approval Panel to ensure that the project is achievable within the timescales allowed and to confirm that sufficient resources are available within the Academic Unit.

Where the project is not pre-determined and planned for them, students need to manage their research projects actively. Otherwise, they can drift for months during the first year of research, and this is a major cause of drop out and also of non-completion within three or four years. Given the financial pressures on students – particularly international ones funded only for the stated duration of the programme – and of course potential UKRI sanctions on subjects with low submission rates within three or four years, it is vital that they are clear about what they are doing and when they should be aiming to do it by. For these reasons, the University requires that Supervisory Teams work with students to produce a research proposal and a plan.

With regard to developing the research proposal, the Supervisory Team can assist students by asking a fairly simple series of questions. For example: What is the topic?; Why is it important?; What have others written on it?; What would the research seek to add?; What method or methods would be useful in undertaking the research?; How could the research be designed?; How will data be collected?; How will it be analysed?; How, in principle, might results add to knowledge and understanding in this field? In addition, it is still useful to show students a good research proposal and take them through it step by step so that they have a clear exemplar to follow.

With regard to planning the research, in principle it seems simple enough to plot the tasks identified in the research proposal against time. In practice, it is extremely difficult to predict in advance even approximately how long things are going to take, particularly if a student has limited research experience, and the results can be over-optimistic to say the least.

Here, the Supervisory Team should help a student to appreciate the pitfalls of planning a research project. One method for doing this has been developed by Delamont *et al.* (1997). Students are given Gantt charts for research projects in their subject which deliberately over-represent the time to be allotted for some aspects of the research process and under-represent the time needed for others. They are then asked to consider the realism or otherwise of these projections, to discuss them, and to re-plan the research. This technique can be extremely effective in stimulating students to think about the relationship between time and task and in enabling them to plan their own research.

Supervisory Teams should also encourage a student to revisit and update both their research proposal and plan frequently. Research topics can change markedly over the course of a project, and research plans need to be modified in response to this and other factors. Discussing and updating the research proposal and the research plan, will ensure that both the Supervisory Team and student are clear about where the research has got to, and what needs to be done to complete it.

Reflecting on Practice

- ◆ Is there a good research proposal you could show to research students?
- ◆ Could you develop research plans for discussion with students?

5. Supporting the Initial Stages of the Research Project

Especially in disciplines where students have created their own research project, they are then faced with detailed preparatory work on the literature, the methodology, and the design of the research.

All of these can pose serious problems for a student at the start of their projects. On the literature, a student may need help in finding it if they are not familiar with the location of sources in the field, with learning how to read it critically, with notetaking, and with referencing. In some subjects, there are established and relatively less contested methodological approaches but, in many subjects, students are faced with a range of different potential approaches and may have to grapple with a range of difficult philosophical, theoretical, and empirical matters. In virtually all subjects, designing a major research

project is a difficult exercise for the uninitiated, with each potential design associated with opportunities and limitations which can have profound implications for outcomes.

Such matters are dealt with in general through Faculty Researcher Development Programmes, and it is clearly important for Supervisory Teams to be aware of the content of these in ascertaining the support needs of their students. In addition, the Supervisory Team still has a role to play in relating general features of literature evaluation, methodology, and research design to the student's topic. For example, setting an exercise for a student to find a key reference in their field, produce a critical review, evidence it from their notes, and cite sources correctly, can help them to evaluate the literature; pointing a student in the direction of good discussions of methodologies in books, theses and papers in their topic area can assist with the adoption of a methodology; and asking for short briefing papers on the advantages and disadvantages of different designs can provide a basis for discussion and clarification of the options.

By these means, a student can be supported through what can be the very difficult initial stages of their research project. The avoidance of mistakes at this early stage, e.g., in the design of the research, can save much time and grief further down the line.

Reflecting on Practice

- ◆ In what ways do the Faculty Researcher Development Programmes support students to acquire the necessary knowledge and skills in terms of evaluation of the literature, methodology and research design?
- ◆ How can you assist the student to acquire these in the context of their project?

6. Encouraging Students to Write

As a student begins to make progress with their project, they need to be encouraged to write as soon as possible, for four reasons. Firstly, it enables them to keep records of what they have done from the start to serve as a basis for later work. Secondly, it encourages them to reflect on what they have done so far and think about where they will go from here. Thirdly, it gives the Supervisory Team the chance to see what has been done, and to advise them about how to proceed. Fourthly, it gets a student into the discipline of academic writing at an early stage rather than leaving it until later when it is more difficult to acquire.

But, as most experienced supervisors will testify, students are frequently extremely reluctant to produce written work. Research (see e. g. Murray 2002) suggests that there are two major factors which constrain research students from writing. One relates primarily to lack of experience of writing regularly at all, of producing longish pieces of work, or of producing academic writing with its demands of precision, clarity, organization and explicit structure. The other factor is confidence. Whereas, as an undergraduate or postgraduate student outlines and discusses the work of other people, as a research student their writing becomes, or should become, a presentation of their own views, ideas, thoughts, etc. This can leave a student feeling very exposed and, particularly if their standard is published work, very dissatisfied with what they have achieved. For these reasons, they may be psychologically reluctant to write.

Supervisory Teams can help a student overcome these problems in a number of ways, perhaps suggesting that a student keep a research diary on a daily basis recording what they have done, time spent on it, analysis, and speculation. This gets the student into the habit of writing regularly, recording, and reflecting, and gives them a basis upon which to construct larger pieces of work.

With regard to writing longer pieces, Supervisory Teams can make the task more manageable. So, initially, they might request a one-page abstract of the chapter setting out its aim (purpose), content (what it would cover), and possible conclusions (what it would say). With that thought through and discussed, the next stage would be to ask for a synopsis fleshing out the abstract and setting out headings and sub-headings to be used. Then a student can be encouraged to fill in the framework piece by piece until they have a draft chapter.

With regard to academic writing, a student can be variously referred to books on the subject, given examples of such writing from the literature in their field, or even paired with a mentor in the form of a student further on with their research who will undertake to read drafts and suggest improvements. Supervisory Teams can refer students to the [Academic Skills Kit](#) for further guidance and support.

In terms of overcoming psychological reluctance to write, a Supervisory Team can reduce anxiety levels by giving the student

explicit permission to submit a 'messy' draft for comment on the understanding that it will be treated as a first stab and not as the definitive submission. Further, it can be worth pointing out to a student that virtually all contributions to knowledge and understanding start off as fairly rough-hewn stones which are then polished usually by several sets of hands before they become the perfect gems of publications. As suggested earlier, the message can be reinforced by showing student earlier drafts of the Supervisory Teams own papers.

Again, here it is worth considering the particular problems faced by non-native speakers of English, who may have little experience of extended academic writing. There is a particular need to help international students to appreciate what is involved and help them to adjust. By these means, Supervisory Teams can try to fulfil one of their principal responsibilities, encouraging a student to write early and often.

Reflecting on Practice

- ◆ Are your students writing early enough?
- ◆ Are they writing regularly enough? If not, how can you assist them to overcome the barriers to writing?
- ◆ How can you assist non-native English-speaking students to improve their writing?

7. Assisting with Academic Problems

Research is, as argued earlier, an inherently difficult activity and it can almost be guaranteed that, at some point, a student will be faced with problems. Such problems may include, for example, exploring the highways and the byways of the topic and drifting too far away from the original focus of the research, setbacks in collecting data, inconsistencies in findings, problems with the status of results – the list is endless. The nature of intervention in such situations is a matter of fine judgement, but Supervisory Teams should try to suggest ways in which the student can, by their own efforts, resolve the crisis.

Reflecting on Practice

- ◆ What sorts of academic problems are research students likely to come up against in your subject?
- ◆ In what ways do you think that you could help without compromising the independence of the research?

8. Assisting with Non-Academic Problems

Research students can experience non-academic problems which can affect their research. At Newcastle, the role of Academic Supervisor can extend to assisting with personal and social problems as well. Supervisors need to be equipped to deal with problems, although it is worth noting that there are a number of additional arrangements to support students including a Faculty Postgraduate Tutor in each faculty, as well as a range of University services for research students with which supervisors need to be familiar, and which are set out in Part One of this Handbook.

In addition to particular problems, it may be noted that one of the most consistent findings of the research literature on research students is that they suffer, to a greater or lesser degree, from intellectual and social isolation. While a degree of intellectual isolation is inherent in undertaking an original research project, this should not be accompanied by social or emotional isolation, which can be detrimental to the success of the research. So, it is important for supervisors to ensure that there are opportunities for students to mix with others. These might include a regular postgraduate seminar, a postgraduate society, common development and training programmes, or participation in conferences or professional associations.

Again, in this context, it is worth stressing that particular consideration needs to be given to supporting international research students. They are more likely to feel socially and culturally isolated than home students, and they may find it more difficult for ask for support from their Supervisory Team or to make friends with fellow students. It is important to be aware of the well-being of international students and as they can feel marooned in an alien environment, and it is important to include them in Academic Unit social activities and point them in the direction of relevant institutional societies and clubs. Also, where international students are accompanied by their families, consideration also needs to be given to involving family in social activities.

Reflecting on Practice

- ◆ What additional support is available to research students in your Academic Unit, the Faculty, and the University?
- ◆ Do you actively seek to encourage your research students to mix with others?
- ◆ Do you pay particular attention to the needs of international students and, where appropriate, their families?

9. Giving Feedback

Once a student is writing, making, and showing work in progress to you, you need to give them feedback. As Brown and Atkins (1988, pp 134-37) have pointed out, a student needs feedback for four main reasons, namely:

- **to enable them to appreciate standards**

Feedback gives the student a feeling for the standards against which their work will be judged. A student is unlikely at the start or in the early stages in particular to be fully aware of the standards that they are expected to attain and even reading successful theses in cognate areas may give them little indication of what to aim for at an intermediate stage of the research project. One of the key functions of the Supervisory Team is to enable a student to appreciate the standards which they are expected to attain. Hopefully, as a student learns from feedback, they should begin to internalize the standards and become able to assess their own work critically. This, of course, is part of becoming a successful researcher.

- **to improve their skills**

Feedback can also assist in developing a student's skills, including methodological skills (e.g., research design, data collection, data analysis, data interpretation) and writing skills. A student may or may not have the expertise to design and implement their research projects, and one of the functions of feedback is to advise on these matters and, in the case of shortfalls, assist the students to acquire relevant skills. Similarly, a student's skills in academic writing are likely to require development, and this is part of the function of feedback.

- **to give them a sense of achievement**

A further, and often neglected, reason for feedback is to give the student a sense of achievement. Being encouraged or praised is crucial to motivating a student, particularly in the early stages before (hopefully) success becomes apparent and becomes an internalized driver in itself.

- **to deepen their understanding**

The final reason is to assist a student to deepen and develop their understanding of the problem or topic that they are researching through discussion at all the stages from inception through to completed drafts.

But, if these objectives are to be achieved, feedback must be given in appropriate ways that will elicit a positive rather than a negative response from the student. Suggestions include:

- **thinking about an appropriate setting for the feedback**

The setting for the feedback can have some bearing on how it is received. If you sit behind your desk with the student on the other side – particularly if they are on a lower level – then the signal is one of formal interaction between a superior and an inferior. If you are side by side in armchairs, the signal is more one of a discussion between colleagues.

- **opening by setting out expectations for the session**

It can be useful at the start to set out your expectations for the session. In particular, you should make it clear that the primary objective is to enable further progress in the research project and where appropriate, you will expect the student to challenge your views and opinions, and that this is a normal and essential part of the process.

- **summarizing your understanding of the material submitted**

One of the most useful things that a supervisor can do is to summarize your understanding of the material that the student has submitted. 'So, it seems to me that the central thrust of what you are saying is....'

- **checking your understanding with the student**

Once you have summarized, it can be very useful just to check that your understanding is the same as that of the student – 'Have I got that right?' This not only reassures a student that you are taking their work seriously but offers an opportunity to correct any misapprehensions at the start of the session.

- **identifying the strengths of the work**

You can then identify what you saw as the strengths of the work submitted, which is an opportunity for praise. 'What I thought was really interesting was... what I most enjoyed reading was...'

- **identifying the areas for attention**

You can identify the areas for attention in ways that are constructive and positive rather than destructive and negative, e.g., 'why did you try to solve the problem using method X rather than method Y?' rather than 'Didn't you realise that you could have avoided these difficulties with method Y?'

- **inviting the student to respond**

Once you have identified the areas, then you can ask the student to respond. Here, it is very important that you allow the student to engage with the matters that you have raised, and it must be recognized that they will need time to respond to

queries about their work. You must also be prepared to listen carefully and check that the student has understood the point being made.

- summarizing the discussion

When the points have been exhausted, then it is important to summarise the discussion. You may try to draw the threads together and then check it with the student or, alternatively, you may ask the student to summarize.

- maintaining a record

Finally, for the benefit of both the student and you, there should be an agreed written record. Normally, this would be written by the student, copied to you, if necessary amended, and then agreed jointly.

By extending the work of Partington et al. (1993, p 78) to the case of supervisor feedback, it can be said that you should avoid acting:

- **as an inquisitor**

Who behaves like a TV interviewer quizzing a politician during an election campaign, rapidly shooting out hostile questions, interrupting the answers, and generally trying to score points. Such an approach may intimidate the students so that he or she is unable to respond or anger them to the extent that the session becomes an adversarial confrontation.

- **as a committee person**

Who takes the student through the material page by page questioning each matter as it arises rather than synthesising points into key issues relating to the research.

- **as a hobby horse rider**

Who has strong feelings or prejudices about one area of the submitted work and keeps returning to questions on this while neglecting other aspects of the research.

- **as a kite flyer**

Who has identified a – usually fairly tenuous – link between the work submitted and another subject and persists in exploring this to the detriment of the substance of the research.

- **a reminiscer**

Who continually regales the student with stories of their own research career to the detriment of feedback on the material submitted.

Reflecting on Practice

- ◆ What arrangements do you make for ensuring that feedback to research students is prompt?
- ◆ How do you ensure that feedback is constructive?
- ◆ Do you maintain written records of feedback given to research students?

10. Monitoring Progress

Clearly, one of the key tasks of a Supervisory Team is to monitor the progress of the research project formally in accordance with University requirements.

With regard to monitoring progress with the student, the University requires that the research student should have a formal meeting with at least one member of their Supervisory Team at least 10 times per year, approximately monthly, to review their progress and that the details should be recorded by the student on NU Reflect. There should be regular contact with each member of the Supervisory Team, at least on three occasions, each year, and there should be at least one meeting with the full Supervisory Team to discuss progress, usually in advance of Annual Progress Review. All formal supervisions should be undertaken in a business-like way, with a date, time and agenda agreed with the student. Supervisors should ensure that, as far as possible, they are not disturbed while they are meeting with the student.

In addition to monitoring progress formally with the student, the Supervisory Team must submit an annual report on the student's progress, as part of the student's formal Annual Progress Review on the PGR CoP system.

Reflecting on Practice

- ◆ Do you meet your research students approximately once per month to monitor their progress?
- ◆ Do you do this systematically?
- ◆ What Academic Unit/Faculty requirements are there for monitoring student progress?
- ◆ Do you meet the University's requirements for annual monitoring?

11. Assisting Students to Complete

After students have persevered through academic and possibly personal problems and completed the basic research, they then enter a new tunnel called 'writing up' their thesis. While a student may have conscientiously written up draft sections and chapters as they have gone along, they now face the task of putting it together as a whole and creating a thesis.

Students can find it difficult to translate their work into a thesis, and here the Supervisory Team may be able to assist by giving them a framework within which to work. One suggestion (see e.g., Cryer 2000, Taylor 2002) is to ask the student to think of themselves as explorers who have undertaken a journey and who are writing a guidebook for others to follow.

As guides, they need to explain where they started from, what other guides they read, why they decided to undertake the journey at all, why they went off in a particular direction, what their route was subsequently, what they discovered on the way, where they arrived at the end of the journey, how it differed from the start, and where they would go in the future. They can be asked to map this on a few sides of paper, thinking carefully about what information must be imparted to enable someone to follow, what should be imparted, and what may be interesting but not strictly necessary.

The Supervisory Team can then give feedback on the map, both on the overall clarity of the guidebook and upon the priorities assigned to particular stages in the journey. By this means, the student can begin to construct a coherent outline of the thesis. Once the general lines are clear, the student can then be asked to fill in more details of sections of the journey, and then sub-sections until they have a detailed guidebook. This can then be translated into the structure for a thesis, e.g., starting point (introduction), existing guidebooks (literature review), reasons (triggers for the research), direction (methodology), route and discoveries on the way (substantive research chapters), arrival (analysis and results), difference from the starting point (contribution to knowledge) and future (where research should go).

If, by these or other means, the student can be assisted to establish a framework for their thesis, they then still have to write it. Here, the Supervisory Team can give guidance at least upon four key matters, namely communication, style, drafting, and managing the writing process.

A thesis is, of course, a form of communication, and it is necessary to consider in advance the audience to which it is addressed and how the student might meet their needs. Here Cryer (2000, p 178) has some excellent advice which a student can be given or pointed towards:

'The crucially important audience for theses are external examiners. Think of them as individuals who are exceptionally busy and grossly under-paid and who therefore have to read theses quickly. They will expect them to be well-structured and to be argued coherently to make the case for certain solutions to specific research problems. Irrelevancies will irritate, as will having to tease out meaning that research students should have extracted themselves. Think of them also as individuals who are very able and experienced in the general area, which means that the background material should be as concise as is consistent with showing that it is known.'

However, no external examiner can be an expert in your work. By the time you finalise your thesis, you and you alone are the world's expert. So, the aspects that make your work significant and original and worthy of a PhD...need to be argued coherently; each step needs to be spelled out, the outcomes must be stated unambiguously, and all their implications identified and discussed in depth.'

With regard to style, it will of course be expected that the thesis is written up in 'academic writing', and it has already been suggested that a student should be pointed towards the literature and to exemplars of the style appropriate to their work. In terms of drafting, even with a framework, students can find this a daunting task. One way of assisting them is to encourage them to write their first draft 'as it comes', and then work with you to polish and re-polish it into its final form.

Again, this can pose a dilemma for the Supervisory Team in so far as there can be a fine line between helping the student clarify what they want to say and writing it for them. There is no simple solution to this dilemma, although it can sometimes be avoided by directing the student to look at other work in which similar problems have been overcome.

In the context of advising on drafts, it is worth noting that the Supervisory Team should not act as proof-readers and should make this clear to the student.

Last, but by no means least, the student has to exercise a high degree of self-discipline to complete the thesis, particularly within a short period of time.

Reflecting on Practice

- ◆ How do you help your students to translate their research materials into a thesis?
- ◆ What constitutes helping as opposed to writing it for students?
- ◆ Are there exemplars you can point students towards to assist their writing up?

12. Advising on Submission

The completion of the first serious draft is usually an immense relief for a student. But it can be a major headache for the Supervisory Team, who need to advise the student whether what they have done has the potential to meet the standards for the award, and if not, what needs to be done to bring it up to scratch. Giving such advice can be particularly difficult at the start of a supervisor's career, when their own experience may only be as an examinee, and they are unsure about what is looked for by an examiner.

In such cases, the starting point for the Supervisory Team is to try to determine the criteria for success or failure. The assessment criteria for the relevant research degree are detailed in the University's Code of Practice for Research Degree Programmes (and Research Degree regulations and or any programme specific regulations). Once the criteria are reasonably clear, the Supervisory Team can then read the draft and try to identify the strengths of the thesis (the area where the criteria are clearly met) and the weaknesses (those where criteria are not met). The latter can then be divided into weaknesses which are minor, major, or which constitute potentially fatal flaws. Again, here it is very useful to have input from all members of the Supervisory Team.

Once the diagnosis has been made and confirmed, then feedback can be given. It can be helpful to do this within the framework set out above – criteria, strengths, and weaknesses – before advising them how to proceed. If all has gone reasonably well earlier, there should not be fatal flaws (which would necessitate further research), but weaknesses to be corrected by re-drafting or textual amendments. Subject to these being made – and the Supervisory Team should insist upon seeing successive drafts – the Supervisory Team should be able to give the green light for submission.

Reflecting on Practice

- ◆ Do you know the criteria for the award of a research degree in your subject?
- ◆ What, in your view, would constitute minor weaknesses, major ones, and fatal flaws in a thesis?

13. Advising on Examination

At least three months before submission, the process of arranging the examination begins. The Supervisory Team will propose and nominate examiners (usually one internal and one external) on behalf of the Head of Academic Unit, considering any potential conflicts of interest and in accordance with the appointment criteria in the Code of Practice for Research Degree Programmes. It is important to consult the student about the appointment of examiners. The identification of an appropriate external examiner in particular can involve some heart-searching by the Supervisory Team; should they suggest Professor X who is a leading authority in the field but is known to be fiercely critical of the offerings of lesser mortals, or Dr Y who is less distinguished but more likely to take a balanced approach to examining the student's work? The ideal is, of course, an external examiner who is distinguished and who will take a balanced approach, and if possible, the Supervisory Team should suggest the names of examiners of this ilk.

With examiners formally appointed by the Dean of Postgraduate Research and the thesis forwarded to them for scrutiny, the Supervisory Team is responsible for arranging the date, time and place of the final examination, the oral examination/viva.

Unless students have previously attended universities in which their awards were conditional upon an oral examination, the chances are that the examination for their research degree will be their first experience of an oral examination. This might be of little consequence if, as in many other European countries, the viva was a public affair, and they could go along and experience what happened. However, this is rare in the UK, and for most students what goes on in the viva has, historically, been a mystery, one which has only recently become the subject of systematic research.

In the absence of hard information, tales of oral examinations being used to inflict unnaturally cruel punishment on research students abound and the student may view the oral examination with fear. Here, the Supervisory Team can play a role, in three main ways.

- ◆ Firstly, by de-mystifying the oral examination through explaining its purposes, procedures, and outcomes. In the case of Newcastle, these are set out in the University's [Handbook for the Examiners of Research Degrees](#) and it can be helpful for the

Supervisory Team to take students through the relevant parts.

- ◆ Secondly, by indicating what the student should do to prepare in terms of re-reading their thesis, keeping up to date with the literature, and preparing for questions.
- ◆ Thirdly, and perhaps most helpfully, the Supervisory Team can arrange for the student to have a short mock oral examination in which colleagues who are experienced as examiners question them on a key part of their thesis and afterwards give feedback on their performance. Such an opportunity to 'taste' what is in store is invaluable in enabling the student to prepare themselves both intellectually and psychologically for what is to come.
- ◆ Finally, where a student has a Student Support Plan, it is important that this covers any potential reasonable adjustments that are required for the oral examination, so that these can be put in place to support the student.

Reflecting on Practice

- ◆ Do your research students have any previous experience of vivas?
- ◆ How do they feel about them? How can you help them to prepare?

14. Assisting with Career Development, Networking, and Publication

It is good practice for the Supervisory Team to assist a student with career development, networking, and the publication of their work.

At one time, students undertaking a research degree, particularly a PhD, were destined predominantly for academia, and career development took the form of socializing them into the values and rituals of the relevant academic discipline. But it is no longer the case that successful research students necessarily become academics – a majority do not – and even those who do follow an academic career require a wider portfolio of skills. Part of the job of the Supervisory Team is, from the very start of the project, to encourage the student to be active in acquiring the key skills necessary to give them an edge in the labour market.

While all skills are important, it is perhaps worth highlighting one, namely the need to encourage research students to acquire the skills to give effective oral presentations because such skills are vital in an academic context. It is important to ensure that students acquire the necessary training, either as part of the Faculty Researcher Development Programme, or through directing students' attention towards the relevant literature, and offering opportunities for students to give mini-presentations and receive feedback.

Under the heading of skills, the Supervisory Team can encourage students to:

- Record the skills that they acquire over the course of their research programme for later use as evidence to prospective employers, which can be done by the student in NU Reflect.
- Network within the subject community and to provide opportunities for them to do so. Academia is heavily dependent upon networking informally and formally, in the latter case through professional associations and conferences. Students need to be encouraged to establish their own informal networks of academic colleagues in their subject areas, and to join in professional networks, e.g., the postgraduate sections of professional associations. This can be important for their research, as a counterweight to isolation, and in acquiring networking skills which will stand them in good stead in any career.
- Publish their work in scholarly journals. Publications, particularly those during a research degree, can help variously to mark out their academic territory, bring them into contact with others working in the same field, boost their self-esteem, give them a better platform for applying for jobs and, last but not least, enhance school publication rates. But students do need guidance from their Supervisory Team about how to write for publication, which journals or publishers to aim for, and how to go about submitting a paper or a book.

Research students' writing for publications, of course, raises the issue of whose names should go on papers submitted to journals etc. Here, practice varies considerably between and within disciplines. In some the convention is that the supervisor's name automatically goes on the paper as, if different, does the name of the person who has obtained the funding for the research. This can and does lead to friction if research students feel that they have done most of the work for the paper but are effectively credited with an equal share of the authorship. This issue should be discussed openly with the student, and one way around this which has been used in some subjects is to have a footnote indicating the relative contributions of the authors, say X the supervisor 20 per cent, and Y the research student 80 per cent.

Reflecting on Practice

- ◆ Do you encourage students to think about career development at the start of their studentships?

- ◆ Do you encourage them to assemble an appropriate portfolio of skills for employment over the course of their studentship?
- ◆ Do you assist them to acquire effective presentation skills?
- ◆ Do you encourage students to network and provide opportunities for them to do so?
- ◆ Do you encourage students to publish?
- ◆ What is the relevant policy in your discipline for the attribution of authorship in publications?

15. Working with Supervisory Teams

The University adopts a team approach to supervision so you should expect to be part of Supervisory Teams of at least two members with the research skills and knowledge needed to supervise the research project. To become a member of such a Supervisory Team it is necessary to be on the Approved Supervisor/Doctoral College Fellow list.

Different approaches may be adopted by the Supervisory Team. In joint supervision, the supervisory responsibilities are shared equally between members of the Supervisory Team. In other styles of supervision, members of the Supervisory Team may have different roles. There may be, for example, a lead supervisor and a co-supervisor responsible for a smaller element of the planned research; or a lead supervisor and an advisor responsible for, and able to deal with, general and pastoral responsibilities. In all instances one supervisor must be nominated as the academic supervisor and be responsible for the quality assurance aspects of the research degree e.g., sign off Project Approval and Annual Progress Review.

Members of Supervisory Teams are expected to discuss the role they adopt in the supervisory team. They should liaise regularly with each other and agree who will read and feedback on pieces of work supplied by the student. The research student is expected to stay in regular contact with all supervisors, and to discuss all aspects of their research with them. The University requires that the research student should have a formal meeting with at least one member of their Supervisory Team at least 10 times per year, approximately monthly, to review their progress and that the details should be recorded by the student on NU Reflect. There should be regular contact with each member of the Supervisory Team, at least on three occasions, each year, and there should be at least one meeting with the full Supervisory Team to discuss progress, usually in advance of Annual Progress Review. More detail on supervisory teams is provided in the University's 'Code of Practice for Research Degree Programmes'.

Reflecting on Practice

- ◆ Do you discuss the requirements for a research degree with your co-supervisor(s) at the start of the studentship?
- ◆ Do you discuss ways of resolving inter-disciplinary differences and giving consistent advice to students?
- ◆ Have you and your co-supervisor(s) clear ideas of who is responsible for what in supervising the student?

Conclusions

Being an effective researcher is a necessary condition to be a research supervisor, but it is not a sufficient one; the latter requires being an effective supervisor as well. That, in turn, involves unpacking what is involved in effectively supervising a research student, reflecting on practice, and improving it. Hopefully these Guidelines will at least give food for thought in encouraging supervisors to review their effectiveness.

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