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Succeeding with Your Master's Dissertation

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- Packed with practical tips and advice
- Explains common pitfalls and how to avoid them
- Comprehensive guide to the entire Master's dissertation process



John Biggam

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Praise Page

I first became aware of John's work on how to undertake your MSc when he came to give a presentation on this subject to our cohort of MSc students. I loved his methodology and practical advice. I bought this book and since then have tried to apply its advice to the MSc students I supervise and others I have tried to help. Buy it, it will help you – it's worth every penny.

Dr Mario Antonioletti, EPCC, The University of Edinburgh, UK

In this book John Biggam, offers a clear background on why a dissertation is a standard part of many Masters programmes, and provides a user-friendly approach to planning and writing large pieces of work. Pragmatic advice and guidance on good practise will help students to keep on track with their dissertation, and avoid common errors. The book is written in a reassuring way which should be applicable to students across disciplines.

Donna Murray, Head of Taught Student Development,
The University of Edinburgh, UK

Biggam's book, now in its fifth edition, is the go-to guide to researching and producing a Master's dissertation. Taking a practical, skills-based yet scholarly approach, it is current, comprehensive and rigorous. Standout content includes sections on common mistakes made by students, useful templates and a unique chapter on Dissertations by Practice, making it an instructive resource for students of the social sciences and humanities alike.

Dr Kate Daniels, Senior Teaching Officer in Academic Training & Development for International Students, University of Cambridge, UK

Dedication

This book is dedicated to my sister Andrea,
the youngest of seven siblings, who dedicated her life to helping students
understand the difference between thoughts and opinions.

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Chapter 1



The Master's dissertation

• What's a Master's dissertation? • What are you being tested on?
• What skills and qualities do you need? • How to use this book
• The structure of the book • Summary of key points

This chapter clarifies what a Master's dissertation is, explains what it sets out to test, identifies the skills and qualities required to complete one, and shows you how to use this book.

What's a Master's dissertation?

At a simple level, a Master's dissertation is a long structured essay on a topic of your choice. However, look at any university Master's dissertation handbook and you will quickly pick up pointers as to what is involved in writing this 'long structured essay', such as:

- 'An independent study . . .'
- 'evidence of in-depth investigation . . .'
- 'showing clear focus . . .'
- 'demonstrating critical knowledge . . .'
- 'using appropriate research methods . . .'
- 'an awareness of ethical issues . . .'
- 'submitted no later than . . .'
- 'between 10,000–15,000 words'
- 'formatted according to . . .'

In other words, what you are being asked do to is to conduct an independent piece of research and write it up within a particular timeframe with a limit

on the number of words you can use. To qualify as research, your work must be tackled in a *systematic* way. This means that you need to identify your topic, have clearly defined objectives, explain how you intend meeting those objectives, carry out your research, analyse your findings, and conclude with reference to what you set out to do and what you have achieved. The latter may include making recommendations or highlighting any implications of your work. Research typically gives new insight into a topic by addressing issues or problems or questions that you have raised or identified or asked. Research may also produce new ways of looking at, or doing, something.

Dissertations come in all shapes. This reflects the type of dissertation that university departments favour. Some departments require that you answer your research objectives through an extensive review of literature, others that you do a literature review and also collect your own research data (e.g. using interviews), or that you create something (e.g. a piece of music or a software program or an architectural model), or that you do an experiment; or perhaps the decision whether or not to focus on theory or practice or a mixture of both is left to you, the student.

Dissertations come in all sizes too. A word limit of about 15,000 is common but dissertations can range from roughly between 7,000 and 20,000 words. The size of a dissertation is left to individual departments to determine. Normally, though, a dissertation that requires an experiment or the creation of an object, leans more to the lower word limit.

Regardless of the wide range of university dissertations on offer, what all these dissertations have in common is that they require students to adopt a systematic approach, i.e. that the *process* has all the hallmarks of competent research. Namely, that students cover – one way or another – the core research activities outlined in Figure 1.1.

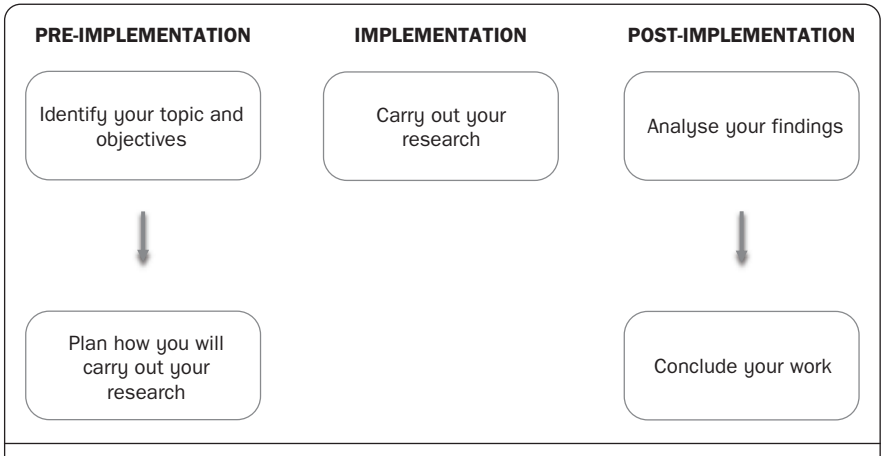


Figure 1.1 The research process

So, a Master's dissertation is an advanced study of a topic, completed independently by you, that adheres to the main stages expected of a research project. The dissertation, in effect, is a process. Understand that and you will have already cleared a major hurdle.

What are you being tested on?

In short, a Master's dissertation is a test to see if you can complete a research project. Your dissertation will be submitted as a collection of chapters. Your chapters should therefore cover the stages of your research project, from start to finish. Your evidence as a competent researcher will be expected to be in those chapters, and so it is those chapters that your markers will look at to determine your marks. It may be that you also have to create something – an architectural model or a play or software code or a piece of music, etc. – or present your work, in which case, these other activities may also form part of the marking scheme.

How you organise your chapters will depend on your research project and the dissertation submission requirements imposed by your department. If your dissertation is theory-based and you are not collecting your own data (e.g. through interviews), then, of course, you will not require a chapter on how and why you are collecting empirical data (but you will still require a chapter on how and why you are examining prevailing theory). Similarly, if you are not creating something, then you will not need a chapter on how and why you are creating something.

Nonetheless, key questions that a marker will seek answers to are mainly research-related. Typical questions include:

- Are the research objectives appropriate, focused, clear and achievable?
- Is the research placed in context and justified?
- Is the student well-read in the area and is there evidence of critical thinking?
- Are the research methods valid and reliable?
- Is there an understanding of ethical issues?
- Have the findings been described/analysed/synthesised?
- Do the conclusions follow from the findings?
- Have appropriate recommendations been made or the implications of the work understood?
- What contribution does this work make?

From the above list of questions, you should realise that you are not getting marks for producing earth-shattering conclusions. That is to say, it is not your final output that is important to the marker, but what is important is that your

conclusions follow from your findings, that your findings came from the proper application of your chosen research methods, that your research methods were selected because they were appropriate to what you set out to do, and all of this is transparent to your marker.

You could have a brilliant conclusion but if your research does not show how you arrived at that conclusion, you will lose serious marks. On the other hand, your conclusion might not lead to a guest appearance on the evening news but if the research that leads to that conclusion is admirably robust, revealing a clear understanding of the research process from start to finish, then you are on the way to securing high marks, and rightly so.

You can ensure transparency in your dissertation by answering *what* and *why* questions at key points in the dissertation – *what* you are doing and *why* you are doing it. Examples of some *what* and *why* questions could be:

1 *What* are my research objectives and *why* have I chosen those research objectives?
2 *What* is the value of my work and *why* do I think that?
3 *What* have others contributed in this field and *why* do I think that?
4 *What* research methods am I using to do my research and *why* am I using those methods?

It is the *why* information that particularly appeals to markers: it demonstrates that you are not merely content with describing your work but that you want to explain it too.

In other words, for your work to be valued as research, process is paramount, both in terms of what you do and how you do it.

What skills and qualities do you need?

There are two types of skills you need to complete a successful dissertation: (1) generic skills, and (2) skills that are research-related. Let's deal with the generic skills first.

The generic skills are skills that you will need irrespective of the type of dissertation that you will be doing, whether it is theory-based or contains a practical element. These include:

- *Time-management skills*. Essentially, working out the time you will need to complete each part of your dissertation and when you will attempt those parts. If you set aside regular time-slots for your dissertation work, you will begin to view your work as a normal activity, rather than an onerous task that you keep delaying to some unspecified date in the future.

- *Organisational skills*. You need to have a disciplined approach to your work, from structuring your dissertation, planning visits to the university library, to arranging meetings with your supervisor.
- *Communication skills*. Communicating your ideas, arguments, the rationale for choices made, whether at meetings with your supervisor or in your submitted work, requires clarity of thought and expression. When communicating, in whatever form, keep it *simple*, keep it *clear* and keep it *relevant*.
- *Listening skills*. Effective communication also requires good listening skills. It is important that you learn to listen to your supervisor when advice is given. When your supervisor suggests that perhaps you should consider altering an aspect of your work in some way, you are being told politely that it is deficient in some respect and corrective action is required. If you listen carefully, your supervisor is telling you how to gain marks and, equally important, how to avoid losing marks.
- *Technology skills*. Information technology skills are taken for granted these days but you will need to acquire specific skills to make your dissertation work go easier. For instance, learn to navigate your university's library databases – that's where most of your academic sources will be found. Similarly, most universities exploit software apps to facilitate referencing (EndNote is particularly popular with staff and students). Even creating a word-processed style sheet for your dissertation will make your life easier. And remember to back up your work!
- *Independent learner skills*. At Master's level the learning is mainly student-centred, i.e. there is a major switch of responsibility from the tutor to you, the student: your supervisor acts as an adviser, albeit an important one, but you take the lead. Taking responsibility for your own work can be quite liberating but it requires the development of new skills as well as confidence in your own abilities. By covering the Master's dissertation process in detail, from start to finish, this book provides the practical skills necessary to allow you to approach each stage of your dissertation with confidence.
- *Presentational skills*. You may be required to present your work to examiners, in which case you ought to be aware of how to produce a skilful presentation, including use of appropriate technologies, voice projection techniques, audience engagement tricks, etc. Presenting your work periodically to friends, and your supervisor, will provide you with invaluable experience in finding out what works and what does not work *for you*.

As well as generic skills, you will need skills that are specific to completing a successful dissertation. In practice, this means that you will need to know how to write the chapters – using the language of academic discourse – that typically form part of a Master's dissertation. These chapters will chart your research journey, where the chapters collectively explain what you did, why

you did it, and what you found out. This book will teach you the following dissertation skills:

- How to write a *research proposal*.
- How to write an *abstract*. You will learn about the four simple things that an abstract should contain.
- How to write an *introduction* that convincingly clarifies what you set out to do. You will learn about the common elements found in an introductory chapter and, specifically, how to write your overall aim and individual research objectives.
- How to write a *literature review* (or extended *contextual review*), showing evidence of critical thinking on your part. Referencing is a key hallmark of academic writing; this book will teach you how to reference in-text and how to create a reference list (or bibliography).
- How to write about your *research methods*. There are numerous research methods available to researchers. You need to be able to explain what method(s) you intend using, your data collection technique(s), and also address any ethical issues.
- How to write your *findings*, exhibiting skills in *description*, *analysis*, and *synthesis*, once again paying careful attention to the language of academic discourse.
- How to conclude your dissertation, ensuring *cyclical closure*.

Structuring all of the above content so as to avoid *student drift* is another skill that this book will teach you.

In addition to generic and specific skills, there are certain personal *qualities* that are necessary prerequisites for the completion of a successful dissertation: *self-motivation*, *self-confidence* and *self-centredness*:

- A Master's dissertation makes demands on your time, concentration and enthusiasm over a lengthy period. If your motivation is strong, and you adopt a positive outlook, you can face every stage with genuine curiosity, making the whole experience enjoyable and, ultimately, fruitful.
- Have confidence in your own abilities. For example, critiquing the work of respected academics demands a level of self-confidence to allow you to express your views on what others are saying. Your views are as valid as anyone else's, providing, of course, you back them up with supporting evidence! You are on a Master's programme because the admissions tutor has confidence that you will complete your studies. Others have faith in your abilities, so have faith in yourself.
- Self-centredness is a quality that will serve you well during your dissertation. From the outset, inform those close to you that you are serious about completing your dissertation, that it is a priority for you, and that you will require their understanding and patience as you devote time and energies to give of your best.

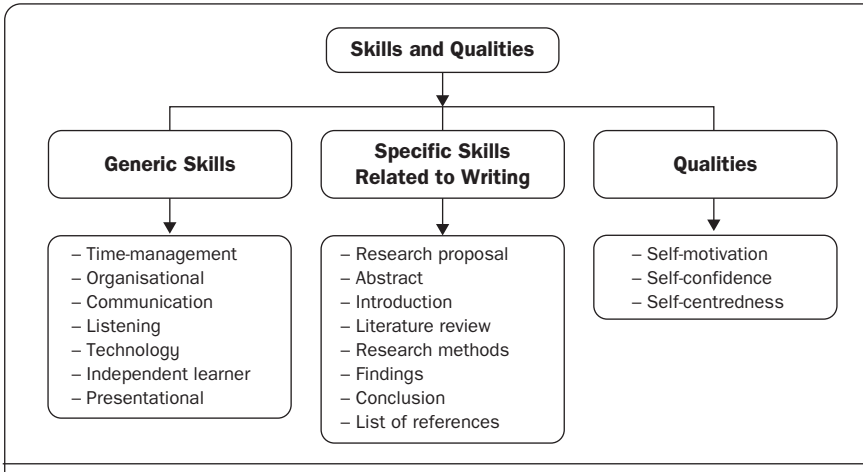


Figure 1.2 Skills and qualities needed to succeed

Figure 1.2 summarises the combined skills – generic and specific – and personal qualities that you need in order to complete a winning dissertation.

How to use this book

In the traditional Dissertation Life Cycle (Figure 1.3), students complete a review of related literature to find out what other research has been done in their area, then have the option of implementing their own practical research (commonly referred to as empirical research), thus allowing them to compare what others say against what they themselves found out.

This book will assume that you will have to complete a dissertation that involves a Literature Review *and* are required to collect and analyse your own data, a model that is particularly favoured by those in the social sciences, e.g. business students who want to show that they are well-read in their research area but also want to carry out their own case study for instance. Of course, it may be that your dissertation does not follow all the stages of the traditional Dissertation Life Cycle, or perhaps adopts a different dissertation model. Nonetheless, you will still need to know how to introduce your research, place your research in context, detail your research methods, write up your findings, and conclude your work. There is benefit in learning how a traditional dissertation is set out, advice that you can apply to your own dissertation as you see fit.

Recognising that dissertations can differ from university to university, and from faculty to faculty (and even within the same university faculty), this book includes guidance on alternatives to the traditional Literature Review, e.g.

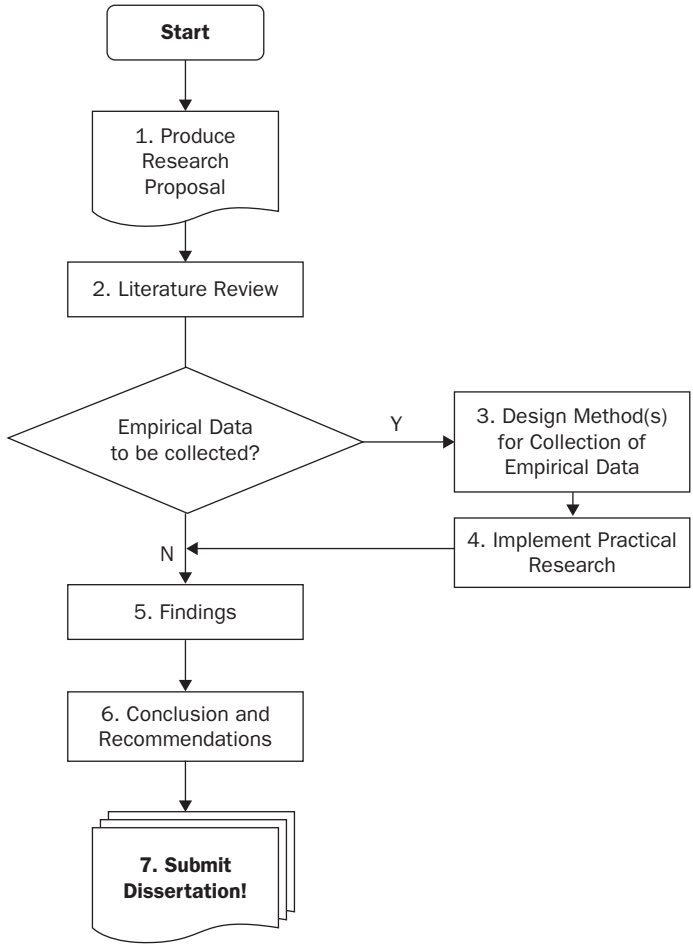


Figure 1.3 Dissertation Life Cycle (DLC)

Systematic Reviews (favoured by health-related faculties) and Contextual Reviews (to help those who wish to write mainly about *things* rather than literature). Also, in addition to covering traditional research methods, this book offers advice to artists – performance and visual – on writing about practice-based research.

The focus of this book is on how to write your dissertation chapters, from Introduction to Conclusion. To that end, relevant practical examples, including sample answers, will be used throughout to illustrate good and bad practice. As you approach each chapter of your dissertation, use this book for guidance on good and bad practice. Information will also be provided on marking schemes and how to prepare for a viva. Read every chapter in this book. You will then get a more

rounded understanding of a Master's dissertation and be better placed to incorporate good advice from a variety of perspectives into your own dissertation.

> **A common mistake**
>
> In each chapter of this book, common mistakes by students doing their dissertation will be highlighted. For instance, if it is necessary to warn you about bad practice related to referencing, then this book will go on to indicate errors that are commonly made by students when they try to reference and record their sources.

By the end of this book you should fully comprehend the core parts that form a dissertation, what makes a good dissertation and, of equal importance, why students can fail to secure easy marks. Writing a dissertation need not be a guessing game. Writing a dissertation that will achieve pass marks or – even better – excellent marks is as much a science as it is an art. The aim of this book is to lay bare the techniques that you need in order to undertake a dissertation. In effect, to equip you with the knowledge to develop the skills to produce a highly competent piece of work. There is truth in the old adage *knowledge is power*; in your case, knowledge equals marks. A Master's dissertation is a wonderful opportunity to study a subject in depth. This book offers you a helping hand.

The structure of the book

Here is a summary of the content of each chapter in this book. Most chapters also end with a checklist and a summary of key points, and refer you to further reading where appropriate.

Chapter 1 The Master's dissertation

Defines a Master's dissertation, highlights the skills and qualities required to complete one, and explains how to use this book.

Chapter 2 Submitting a research proposal

How to complete a research proposal.

Chapter 3 Preparing for your dissertation

Offers practical advice on preparing for your dissertation, specifically on: creating a dissertation template, making the most of your supervision meetings, dealing with feedback from your supervisor, and getting to grips with marking

schemes early on. Typical student comments on the dissertation journey are also included.

Chapter 4 Plagiarism and referencing

How to reference in the body of your dissertation (*in-text* referencing) and how to create a reference list at the end of your dissertation. The Harvard system of referencing is used as an example. A collection of referencing templates for books to websites using Harvard are included as an appendix. What counts as plagiarism is also discussed, the notion of self-plagiarism, and how to avoid plagiarism.

Chapter 5 The dissertation Introduction

How to write an introductory chapter. In particular, how to write your research objectives.

Chapter 6 The Literature Review

How to write a Literature Review chapter. The difference between mere description and critical evaluation (a higher-level skill) is highlighted. Learning theory is introduced to help you understand what you have to do to get high marks. How to search for your sources and where to search. Alternative Literature Reviews are also discussed: Systematic Reviews (mainly used by health-related disciplines) and Contextual Reviews (for those mainly reviewing things, e.g. paintings, more than literature).

Chapter 7 Research methods

How to write a chapter on traditional Research Methods: choosing and justifying your research strategy and data collection techniques, the need for an analysis framework, how to approach the limitations of your research, considering the ethical issues, and the importance of answering *what* and *why* questions. Alternative research methods for artists are also addressed.

Chapter 8 Writing up your findings

How to write up your empirical findings. Two examples are given for illustration purposes: a traditional write-up (particularly relevant for social science students), and one for artists. The different subject disciplines highlight the common activities of description + analysis + synthesis that are relevant to many dissertations.

Chapter 9 Concluding your dissertation

How to write your concluding chapter with a view to achieving *cyclical closure*.

Chapter 10 Writing the abstract

How to write an abstract, and making use of an easy-to-use template. Examples of abstracts are included.

Chapter 11 Adding a professional touch

How to go that little bit further and add optional extras to your dissertation: a list of abbreviations, a glossary of terms, and a simple index.

Chapter 12 Summary of good and bad practice

How to prepare for a viva. Also describes various marking schemes, and provides a neat summary of good practice to adopt and bad practice to avoid in your dissertation.

The next chapter – Chapter 2 – takes you through the content of a research proposal.

Summary of key points

- A *Master's dissertation* is an advanced study of a topic, completed independently, that adheres to the core steps expected of a research project, wherein you identify your topic and objectives, place your research in the context of what others had done, plan how you will carry out your research, carry out your research, analyse your findings, and conclude your work.
- You are being *tested* that you can do a research project all on your own. In effect, you are being tested that you can follow a research process that is acceptable to the academic community in your subject area.
- Top dissertations, at key points, answer not only *what* questions but also *why* questions.
- To complete a Master's dissertation, you require a combination of *generic skills* (time-management, organisational, communication, listening, technology, independent learner skills, and presentational), *personal qualities* (self-motivation, self-confidence, and self-centredness), and *skills specific* to dissertation writing (completing a research proposal, writing a Literature Review, detailing your research methods, etc.).
- *The Dissertation Life Cycle* highlights the conventional stages of the traditional dissertation journey: produce a research proposal, write a Literature Review (or equivalent), design appropriate research methods, implement empirical research, analyse the findings, conclude the research, and submit the completed work.
- Dissertations come in *all shapes and sizes*, and not all dissertations reflect the traditional Dissertation Life Cycle. For example, some may have a Systematic Review (referred to later) instead of the traditional Literature Review, while others may not require the student to implement their own empirical study.
- *How to use this book*. This book will take you through every stage of the traditional Dissertation Life Cycle, from research proposal to preparing for a viva. For performance and visual artists, it will show you how to write about your research strategy (appealing to the concept of practice-based research) and how to analyse your findings.

Chapter **2**



Submitting a research proposal

• Purpose and content • Working title • Background information • Overall research aim • Individual research objectives • Research methods • Setting a timescale • Ethics • Checklist • Further reading • Summary of key points

This chapter shows you how to write a research proposal, from working out a title for your dissertation to detailing your proposed research and considering ethical issues that may arise.

Purpose and content

A research proposal serves a number of functions. From the perspective of your institution, a research proposal: (1) allows your university department to determine if your research proposal meets the institution's academic standards; (2) lets the department allocate appropriate dissertation supervisors; and (3) reassures the department that any ethical issues arising from the proposal are addressed to the institution's satisfaction. From your perspective, it forces you to think seriously about your research topic and to clarify what you want to do and how you want to do it.

Your potential supervisor needs to know some details about your proposal. Not only what you want to research and how you want to do it, but also why you think it is worth doing and what reading you have done on the subject to inform your decision. From that work, intelligent discussion can then take place between you and your supervisor on the way forward.

A good research proposal will do the following:

- Have *a working title.*

- Sketch some *background information* on the general area that interests you, including the rationale behind why you want to focus on a particular aspect of that subject.
- Identify the *overall aim* of your research (i.e. what you are trying to achieve). Some institutions prefer this to be in the form of a research question.
- Specify the *individual objectives* required to help you to achieve your overall research aim. Once again, some institutions prefer that these individual research objectives be posed as individual questions.
- Outline how you will carry out your research (this is called your *research methods*), including a *timetable* to complete these activities.
- State the *value* of your intended research (because you need to convince your supervisor that this is an area worthy of study).
- Indicate whether or not *ethical issues* arise from the proposal (e.g. research involving school pupils) and, if so, how these issues will be addressed to meet the institution's ethical standards in research. Some institutions will require that a separate form on ethics is completed and submitted alongside the dissertation proposal form; other institutions include a question on ethics in the dissertation proposal form itself.
- List *key literature* that you have referred to in producing your proposal, either in the form of a Reference list (i.e. a list of all the literature explicitly cited in the body of your research proposal) or a Bibliography list (i.e. a list of all the literature explicitly referred to in the body of your proposal and other literature that has impacted on your thinking).

Note the words 'sketch', 'identify', 'specify', 'outline', 'estimate', 'state', 'indicate' and 'list': they emphasise that your proposal is a brief document, normally consisting of one or two pages in length, three at most.

Universities tend to provide their dissertation students with a formal dissertation proposal form to complete, normally to be submitted online. The format of the form may differ from department to department but the elements to be completed generally reflect the checklist above. Appendix A contains an example of a typical dissertation proposal form.

Working title

A working title is just that: something to give you and your supervisor a handle on your dissertation – it can be polished up later. Your dissertation needs to be a focused study, and your working title should reflect that focus. So, before you can work out your title, you need decide on your focus of study.

The trick to achieving 'research focus' is, first of all, to think of a subject area in general terms (e-Learning, computer security, drugs, domestic abuse, absence management, etc.) and then to home in on a particular aspect of that subject. Even then, you cannot simply pluck your research focus out of thin air. You need to do some background reading to determine if it is a topic worthy of

study. For example, published reports and articles may highlight the need for more research in your chosen field, thereby providing evidence in support of your research proposal.

Your working title should capture the focus of your research. Remember, to start with, think of your dissertation topic in general terms. For example:

Working title → *Greenhouse Gases*

Next, identify the aspect of that general topic that you want to research. For example, *the cost of reducing* them. Now join them together:

Working title → *The Cost of Reducing Greenhouse Gases*

That is still far too general a topic. You could be more specific and focus on a particular sector, e.g. Agriculture, giving:

Working title → *The Cost of Reducing Greenhouse Gases in Agriculture*

That is still a big task, even for a Master's dissertation. You might want to add even more focus, for instance, by limiting your study to one particular country:

Working title → *The Cost to the UK of Reducing Greenhouse Gases in Agriculture*

You can, if you wish, convert your title into a question:

Working title → *What Is the Cost to the UK of Reducing Greenhouse Gases in Agriculture?*

It is very common, although not obligatory, for students to state in their title where they will get their empirical data (e.g. *The Impact of a Management Bonus Culture on the General Public: A Case Study of The Royal Bank of Scotland*).

To give you an idea of the sort of titles that students produce, here are some examples:

- Accommodation for the Homeless: Analysis and Design Criteria
- Testing for European Equivalence: An Evaluation of Budget Deficits and Economic Growth
- Perceptions of Community Policing in Rural Areas
- First-Time Fathers' Experiences of Parenthood

It is easy to work out how each of these titles was formed from the general (research area) to the specific (research focus). Let's take the first example: 'Accommodation for the Homeless: Analysis and Design Criteria'. The formation of the title is clever in its simplicity. The general area is on the left-hand side of the colon (*Accommodation for the Homeless*) and the specific focus is

on the right-hand side of the colon (*Analysis and Design Criteria*). You could adopt that simple technique yourself.

Example 2, 'Testing for European Equivalence: An Evaluation of Budget Deficits and Economic Growth', follows the exact same pattern as the first: the general subject area is on the left-hand side of the colon (*Testing for European Equivalence*) and the specific research focus is on the right-hand side (*An Evaluation of Budget Deficits and Economic Growth*).

Example 3 also moves from the general to the specific but dispenses with the colon. This example – 'Perceptions of Community Policing in Rural Areas' – could easily have been rewritten with a colon, without loss of meaning (*Perceptions of Community Policing: Rural Areas*).

Example 4, 'First-Time Fathers' Experiences of Parenthood', also contains the general and the specific, but with the specific focus mentioned first in the title (*First-Time Fathers' Experiences*) followed by the general topic (*Parenthood*). This title could have been rewritten with the general topic first, followed by the specific, with a colon separating one from the other, as in 'Parenthood: First-Time Fathers' Experiences'.

Table 2.1 breaks down the development of each of these titles. It is a matter of personal choice whether you start with the general topic and move to the specific focus (as in examples 1, 2 and 3) or emphasise the specific focus of your research first and then the general topic (as in example 4) or use colons to separate one from the other (as in examples 1 and 2) or dispense with colons altogether (as in examples 3 and 4). However, what you must do somewhere in your title is state your general research topic and your specific research focus.

Table 2.1 Developing a dissertation title

	Title	General topic area	Specific topic focus
1	Accommodation for the Homeless: Analysis and Design Criteria	Accommodation for the Homeless	Analysis and Design Criteria
2	Testing for European Equivalence: An Evaluation of Budget Deficits and Economic Growth	Testing for European Equivalence	An Evaluation of Budget Deficits and Economic Growth
3	Perceptions of Community Policing in Rural Areas	Perceptions of Community Policing	Rural Areas
4	First-Time Fathers' Experiences of Parenthood	Parenthood	First-Time Fathers' Experiences

Let's look at one more title to make one further point:

External Branding in the Public Sector: A Case Study in the NHS

In this case, the general topic (*External Branding*) and the specific focus (*in the Public Sector*) appear before the colon. The student, though, has decided to highlight the empirical research strategy (*A Case Study in the NHS*). Broken down into its component parts, this title format is:

general + specific: example of specific.

If you follow any one of the approaches outlined above, it should not take you long to produce a title for your dissertation.

Throughout this book, many different examples will be used to illustrate various tasks in writing a dissertation, but particular reference will be made to the following scenario. Imagine that you are a Master's student interested in choosing e-Learning as the subject of your dissertation. You now know that you cannot do a dissertation on the general subject of e-Learning: your proposal must be *focused* on a particular aspect of e-Learning. Let's suppose that you are keen on investigating how academic staff are being prepared to cope with e-Learning in the university environment, and that, as well as reading what others have to say about these challenges for academic staff, you want to collect your own data through a case study at one university. A working title could be: 'The Challenge of Preparing Academic Staff for e-Learning in the University Environment: A Case Study'.

Background information

One of the questions that your supervisor will ask is, 'Why do you want to study this area?' or 'What evidence is there that it is an area worthy of study?' This is where your background reading comes in to play: to show your supervisor that you have done some initial reading by explaining the rationale behind your proposal.

For instance – staying with the e-Learning example (how academic staff are coping with the challenge of e-Learning) – it could be that there are conflicting reports on the progress of e-Learning in universities, with some literature enthusiastically predicting exponential growth in e-Learning as a means of teaching students and staff embracing e-Learning with open arms; while other literature casts doubt on such views, complaining that evidence of staff opinions and experiences of e-Learning are anecdotal in nature (perhaps universities are blowing their own trumpets!) and that proper research needs to be carried out to find out how staff are indeed being prepared to meet this technological challenge.

Do not get carried away with your background information. This is not the place for a comprehensive review of literature on your dissertation topic. There will be plenty of opportunity in your actual dissertation to implement such a review. Instead, be brief and be focused. All that you need do at this stage is to provide some basic contextual information, supported by relevant literature, to justify your proposal.

It is only once you start your dissertation proper, i.e. after your proposal has been accepted, that you will be required to complete a substantial review of literature. Nonetheless, this background work will cite appropriate literature sources. Your completed dissertation proposal – from title to list of key references – may stretch from one to three pages or more, depending on your institution's requirements, and your background information will form part of that submission.

To recap: your background information should do the following:

- Show that you have done some reading on your chosen area.
- Place your proposed research in context.
- Lead to an understanding of why you want to research this area.

One way to write your background information is to mimic the approach used to produce a working title: start from your general topic (e.g. e-Learning in universities), then move to an aspect of that general topic that interests you (e.g. preparing staff to deliver e-Learning to students) but, in doing so, make it clear why that specific area is worthy of study (e.g. growth in digital learning, implications if staff are unprepared, need for in-depth study to ascertain staff views, etc.).

For emphasis, you might find it useful to have a specific paragraph/section that identifies who will benefit from your research. Will it be the general public? A specific industry? The research community? In Appendix B there is a completed dissertation proposal that emphasises the main beneficiaries by including a separate section headed 'Beneficiaries of this research'. Doing so adds extra punch to your proposal. Normally that paragraph/section comes after you have clarified what you are going to do, i.e. after you have established your research aim and objectives, including which research methods you will use to achieve them.

Overall research aim

Next, after completing your background information, you will need to clarify your *overall research aim* and the *specific objectives* that you intend to meet in order to achieve that overall research aim. For now, let us concentrate on your overall research aim. This will be a statement based on your focus of study. In the e-Learning example, where the research focus is to investigate how academic staff are being prepared to cope with the challenge of e-Learning in the university environment, the research focus could be rewritten to form the overall research aim as follows:

Research Focus:	To investigate issues surrounding the preparation of university academic staff for e-Learning.
↓	
Research Aim:	The overall aim of this research is to advance an understanding of the issues surrounding the preparation of university academic staff to support student e-Learning.

An easy way to arrive at your overall research aim is to start from first principles and break the process down into simple steps, as illustrated in the example in Figure 2.1. Starting with Step 1, think up one word to identify your research area of interest (e.g. 'e-security').

In Step 2, you include other words to give a clearer idea of your research focus (e.g. 'e-security', 'breaches', 'customer confidence', 'online banking').

Then, in Step 3, you connect these words to form a sentence (e.g. 'This is a study of e-security breaches and their impact on customer confidence in the area of online banking').

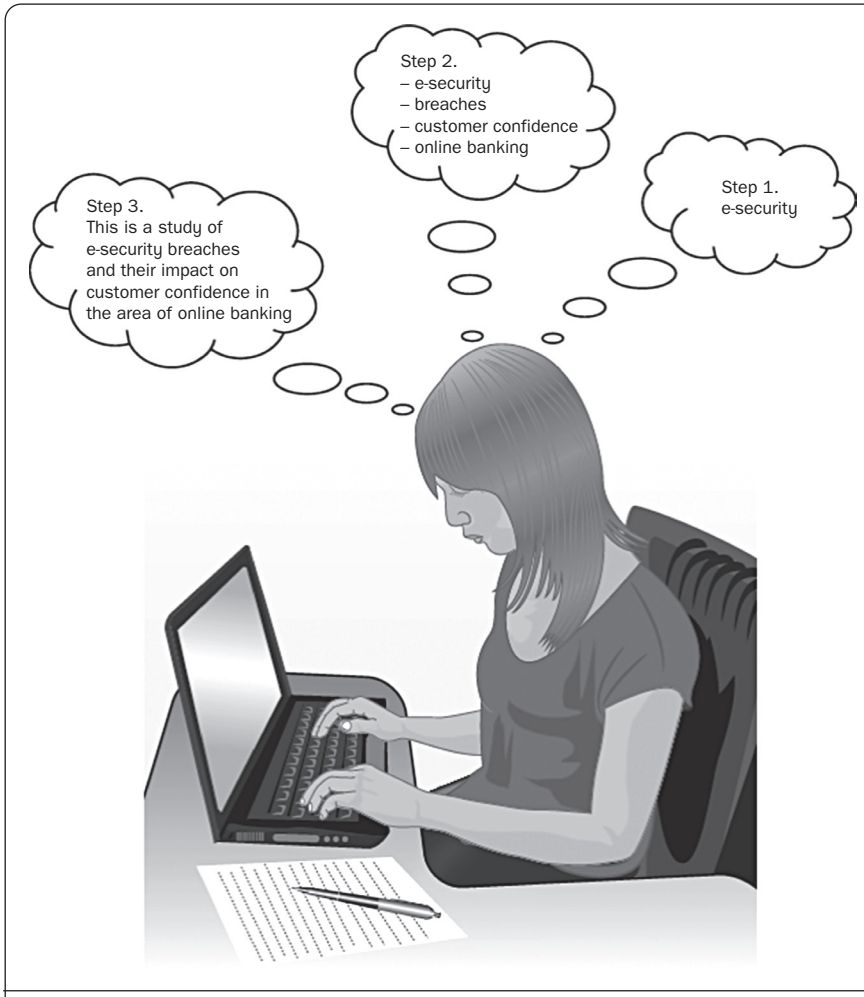


Figure 2.1 Writing your overall research aim

It is an easy matter to go one step further and incorporate the phrase 'overall aim' (abbreviated to 'aim' if you want) to produce your formal research aim.

> The overall aim of this research is to explore the impact of e-security breaches on customer confidence in online banking.

Let's take another example. Suppose that you change your mind and opt instead to write a dissertation on how to achieve a top mark in employment aptitude tests in the banking industry (somewhere in your dissertation you will need to define what you mean by a 'top mark'). To arrive at your overall research aim, you repeat the same process as before, this time concentrating on your new topic (Figure 2.2).

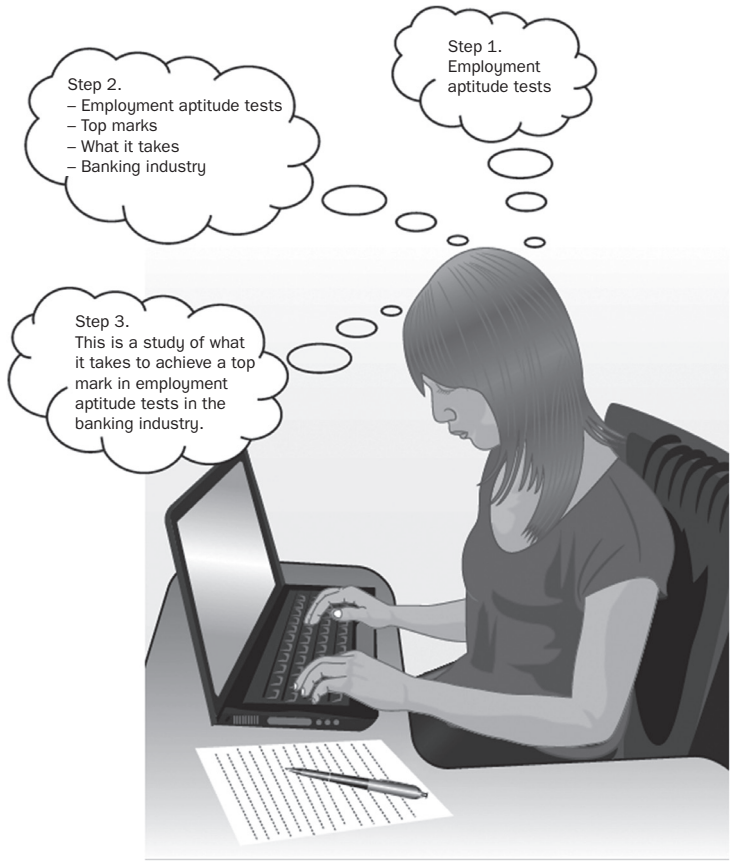


Figure 2.2 Another example of how to arrive at your overall research aim

Once again, think of your research area in terms of one word or phrase (e.g. 'Employment aptitude tests'); add other words to help clarify your research focus (e.g. 'Top marks', 'What it takes'; 'Banking industry'); and then write this as a sentence (e.g. 'This is a study of what it takes to achieve a top mark in employment aptitude tests in the banking industry'). Finally, convert this into a formal research statement, starting with the words 'The overall aim of this research':

> The overall aim of this research is to elucidate the elements that determine a top mark in employment aptitude tests set by the banking industry.

If you follow this process, it will allow you to arrive at your overall research aim. For easy reference it is now summarised:

Step 1: Think of your research area in terms of one word or label.
Step 2: *Add* other words to help clarify the context/focus of your research.
Step 3: *Connect* these words to form a sentence.
Step 4: *Convert* this sentence into a formal research statement, 'The overall aim of this research . . .'

Professional researchers often prefer to formulate their overall research aim as a *research question*. Rather than writing that your overall research aim is 'to elucidate the elements that determine a top mark in employment aptitude tests set by the banking industry', you could instead articulate your research task in the following terms: 'Central to this research is the need to answer the following question: *What are the elements that determine a top mark in employment aptitude tests set by the banking industry?*' In this way, you may find your research task to be more focused and driven in the pursuit of an answer.

The next section will explain how to achieve your (overall) research aim by breaking it down into specific, achievable *research objectives*.

Individual research objectives

You now have to decide what it is you need to do to fulfil your overall research aim. This means that you have to list your individual objectives, or mini aims. Listed below are objectives for the aforementioned e-Learning dissertation. We will develop and use them for reference throughout this book.

Within the context of higher education, the specific objectives of this research are to do the following:

1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
4 *Formulate* recommendations on staff preparation issues.

Note that our working title for the dissertation on e-Learning was 'The Challenge of Preparing Academic Staff for e-Learning in the University Environment: A Case Study'. Now that we have the detailed research objectives, mentioning drivers, barriers, and preparation models/frameworks, we could, if we wish, alter our working title to reflect this detail, e.g. 'Preparing University Academic Staff for e-Learning: A Study of Drivers, Barriers and Preparation Models/Frameworks'. The case study could still be highlighted in the research methods. Either title would suffice.

The words in italics in the list of research objectives – *identify*, *evaluate*, *explore*, and *formulate* – are called *keywords*. There are a whole host of keywords that are available for student use, such as *analyse*, *assess*, *classify*, *discuss*, *establish*, *evaluate*, *explore*, *identify*, *investigate*, *outline*, etc. They indicate the type of research activity to be carried out for each objective. For instance, *identify* normally suggests a straightforward academic undertaking, one not requiring much in the way of intellectual discussion and debate. In the above example, the student would use the first objective to set the scene by ascertaining the forces driving e-Learning and the barriers to the successful delivery of e-Learning (even then, the student would link the drivers and barriers to the focus of the research study, i.e. staff preparation for e-Learning).

It is important that for your big objectives you incorporate keywords that indicate in-depth academic study. Keywords such as *evaluate critically*, *assess*, *explore*, *investigate*, *examine*, all imply an appropriate level of intellectual activity suitable for a Master's dissertation. Hence, objectives 2 and 3 in the e-Learning example use the keywords *evaluate critically* and *explore* to indicate to the supervisor that these objectives will form the main part of the student's research. Objective 4 uses quite a neutral keyword – *formulate* opinions – implying that as a result of the research, the student will make certain recommendations. Not all research is about making recommendations. You might want to highlight the *implications* of your work instead.

Students tend to have difficulty expressing their overall research aim and related individual objectives. It is not unknown for students to be still grappling with their objectives long after their dissertation has started. At a first

supervisor meeting, one student presented individual objectives in the following general format:

1 Identify . . .
2 Identify . . .
3 Identify . . .
4 Identify . . .
5 Identify . . .
6 Identify . . .
7 Identify . . .

By including the keyword *identify* for every objective, the student was suggesting that the work would be superficial in nature throughout, and thus lacking in the depth expected of a Master's dissertation.

Normally, using *identify* is acceptable for an early, straightforward objective (e.g. to provide background information) but try and steer clear of using such a keyword in other objectives, although there are exceptions. For example, it may be that you wish to identify the causes of a particular military conflict and that such a task is widely recognised as a significant achievement in itself; in which case, the use of *identify* would be an acceptable keyword.

The above student also had far too many individual objectives (seven in total). This would have had the effect of either making the work appear piecemeal or unnecessarily increasing the student's workload. Four or five objectives are typical.

Another student did not specifically list research objectives, but instead, in a woolly and long-winded paragraph, vaguely referred to about ten general things the student wanted to do. The student was trying to cover too many issues. In any case, the student ought to have clearly itemised the individual research objectives.

This brings us to the issue of formatting your research objectives. Numbering your individual research objectives makes it easier for everyone. For your part, you can easily refer to Research Objective 1 and Research Objective 2 – or RO1 and RO2 – throughout your dissertation and the reader will know what you mean. It will also make it more difficult to stray from what you set out to do. At supervisor meetings, referring to numbered objectives will remove any ambiguity about which objective is being discussed. Furthermore, you will make it easier for your marker, and yourself, to ascertain if you have completed your research objectives.

Students who are unaware of how to write their research objectives tend to use vague terms, such as 'do' or 'study' or 'look at' or 'learn about'. Doing so sheds inadequate light on the level or type of research study to be undertaken. Using fuzzy terms will make it difficult for you – and your marker – to determine if, at the final submission of your work, you have met your initial research objectives (e.g. how does your supervisor assess whether or not you have 'looked at' your area of study?).

In general, a good approach to listing and writing research objectives is to:

- Number your objectives.
- Use a simple keyword for the first objective (such as *identify*, *define*, *outline*, etc.) to provide the background to your subject area.
- For the other objectives (excluding the last one) use keywords that suggest in-depth research work (such as *explore*, *evaluate critically*, *assess critically*, *examine*, *analyse*, *determine*, etc.).
- And, for the final objective, use a keyword that links easily to a concluding activity (such as *formulate*, *produce*, *develop*, *recommend*, *propose*, *advance*, *highlight*, etc.).

If you have converted your overall aim into a specific research question to which you seek an answer, then you may also decide to similarly reshape your individual research objectives into sub-questions, the answers to which will help you meet your main research question.

Appendix C contains a list of keywords to use with your research objectives.

> **! A common mistake**
>
> Students often lack a strategic approach to nailing down their research topic, with the result that they take too long to do so. The trick is to have a focused research aim, developed incrementally using the approach outlined in Figures 2.1 and 2.2, and then to consider the mini objectives that collectively help you to achieve that focused aim. If your overall aim is expressed as a question, then formulate lower-level research questions, the answers to which collectively answer your main research question.

Research methods

As well as containing background information, an overall research aim, and individual research objectives, your research proposal should include information on how you intend to do your research. The latter is referred to as your *research methods*. For your research proposal, it is only necessary to provide an outline of how you will conduct your research. Two ways in which Master's dissertation students are normally expected to implement their research work are as follows:

1 Through a Literature Review or equivalent.
2 By collecting their own data (this is known as *empirical* research).

The Literature Review forms one of the main activities in your formal dissertation and is where you seek out literature from a number of sources (journals, books, conference proceedings, etc.) with a view to showing that you are well

read in your topic area and that you can describe and evaluate sources relevant to your research.

A Literature Review forms part of your research methods. You should indicate the types of literature you will be sourcing in your full study. You do this in two ways: by referring to general kinds of literature sources, such as books, journals, conference proceedings, reports, etc.; and by giving some examples of the literature that you will use in your research. You should also indicate the library databases that you will need access to in order to support your research. So, if your research area was in the area of computer security, you might make the following statement:

> This study will make use of a number of literature sources, including reference to pertinent books, journals, reports, conference proceedings and Government publications. Examples of these include: periodical surveys such as the DTI Information Security Breaches Survey and the CSI/FBI Computer Security Breaches Survey; the *Journal of Information Warfare*; and proceedings of the European Conference on Information Warfare. Importantly, the following library databases will, in particular, be utilised to support this research: Web of Science, ACM Digital Library, and Computer and Information Systems Abstracts (ProQuest).

If your research does not depend solely on a Literature Review (i.e. it is not based purely on theory) and you intend collecting your own data to supplement your Literature Review findings, then you must state how you will accomplish your empirical work. For example, if you know that you will be implementing an experiment of some sort, then say so. Similarly, if you expect to explore a specific type of organisation (e.g. a bank), then once again state this. You also ought to articulate how you expect to collect your data (questionnaires, interviews, etc.). The following example, on our e-Learning topic, makes the points very well. Note that it is unimportant if you choose to refer to a Literature Review using initial capital letters or not.

> The primary data (i.e. empirical data) will be collected through a case study. A case study is a study of a single unit, allowing exploratory research in depth. The case unit will consist of an academic department within Inverclyde University.
>
> The means of collecting primary data will be based on an initial questionnaire from which a subset of the target population will be subject to a detailed follow-up interview. In addition, a number of elite staff – those responsible for the success of e-Learning and staff training – will be interviewed. The combination of a literature review and empirical research will allow theory and practice to be compared, from which a rich picture of academic staff preparation should emerge.
>
> This research does not aim to generalise the status of staff preparation in e-Learning but, instead, seeks an in-depth understanding of the elements that

constitute e-Learning preparation, including drivers and barriers. Hence the use of a case study to support an extensive review of relevant literature.

Chapter 6 of this book tells you what you have to do to write a Literature Review (including alternatives), while Chapter 7 explores different research methods used in empirical research.

Setting a timescale

It is standard practice to include an estimate of how long you expect each stage of your research to take. To work this out, write down the distinct phases of your dissertation and opposite each phase enter the number of weeks or months you expect that activity to last. For example, a Master's dissertation to be completed over a four-month period between June and September might have the timescale shown in Table 2.2. This is assuming that you are writing up your dissertation as you go along. Your timings may differ because your dissertation may be longer or shorter in duration.

Table 2.2 Project timescales (four-month Master's dissertation)

Dissertation activity	Duration (in weeks)	Month
Clarify aim/objectives	2	June
Literature Review	4	June–July
Research methods	2	July
Data collection	3	August
Findings	3	August–September
Conclusion	2	September

Some of the dissertation activities will overlap and so the picture is not as straightforward as depicted in Table 2.2. For example, it appears that the above Literature Review will take about four straight weeks to complete, but the reality is that you will be reading and using literature sources at other times outwith this period. The four-week block is simply signalling to your supervisor where in your dissertation journey you expect to start and finish the bulk of your Literature Review.

It is rare that you will adhere rigidly to your projected timescales. That is not a fault. It is just that life rarely follows our intentions to the letter. So, include free weeks to accommodate the unexpected – such as flu, tiredness, other project deadlines, domestic situations, etc. – when you plan your activities.

Nonetheless, listing dissertation activities against rough timescales will help you gain an overview of what lies ahead and provide you with an appreciation

of how much time you have to tackle each of the main parts that form your dissertation.

If you use a chart, such as a bar chart, to display your timescale, then this will add a professional look to your presentation. Figure 2.3 shows the projected timescales for another Master's dissertation with different timescales, but in the form of a bar chart.

Other charts can be used with similar success. For example, a Gantt chart is a good way to display your research tasks graphically. A Gantt chart is a special type of bar chart, where the bars represent the duration of each task and are placed in the chart to show the sequence of tasks as well as potential overlap. Figure 2.4 is an example of a Gantt chart for a dissertation starting some time in September and finishing at the end of April.

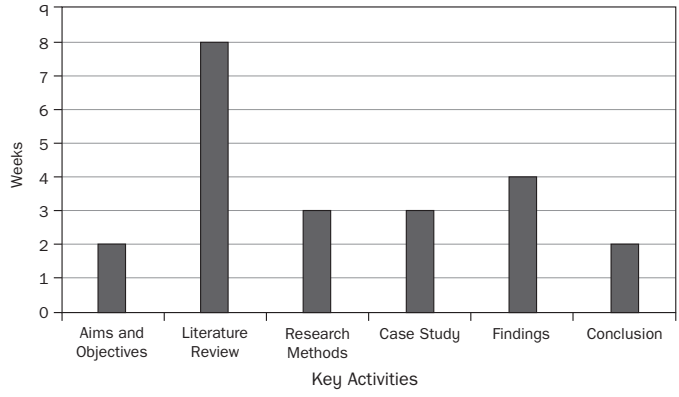


Figure 2.3 Projected dissertation timescales (in weeks)

Activity	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
Clarify Aim/ Objectives								
Literature Review								
Research Methods								
Case Study								
Findings								
Conclusion								

Figure 2.4 Gantt chart showing dissertation timescales

If you are an art student or a drama student and you are also expected to create a piece of art or drama, as well as write about it, then your activities and timescales will differ accordingly, with perhaps more weight given to the creation process.

You must take every opportunity, however small, to present your work in the best possible light. Using tables and charts to display information is one way to make your work look good and gain easy marks. Your supervisor will appreciate your efforts and will already begin to see you as a 'good' student.

Ethics

When we are young, our parents teach us how to behave. As we grow older, we become shaped by other influences: friends, religion, the law of the land, colleagues, sporting allegiances, etc. When we adopt a moral stance on how we think people ought to behave then we are entering the world of *ethics*. Ethics is essentially a code of conduct on how we ought to lead our lives. Sometimes it can appear in written form – as reflected in the laws of the land – but it can also be present in unwritten philosophical and social beliefs that reveal themselves in everyday behaviour.

Ethics is not a science, i.e. it is not absolute – people can, and often do, disagree on what is acceptable and unacceptable conduct. For example, one country's citizens may believe that the death penalty for a crime, however heinous, is unethical, whereas those in another country may hold a different point of view. Closer to home, one student may consider that cheating is an efficient use of scarce resources, while another student might argue that such behaviour is wholly unethical. Ethics is now a popular concept that impacts on many diverse strands of our lives, from banking to shopping to environmental issues.

Research ethics refers to the application of a moral code of conduct when human participants are the focus of empirical research. As you design your approach to carrying out your own empirical research, you need to give serious consideration to the matter of research ethics. For instance, if you are a Master's dissertation student who wants to do research in a school, then you will need answers to some obvious questions. Who do I need permission from to do my research? The head teacher? Individual teachers? Pupils? Parents? My own university? You will need to make it clear what people are signing up to. What if you are observing playground behaviour – how do you get consent from so many pupils running about? Can you get an opt out to some consent? You will also need to be sensitive to the issue of confidentiality when you write up your research work. As you can see, ethical issues can easily mount up when you start to research people.

There are a number of core ethical principles that your research should meet (Figure 2.5):

- *Transparency*: The purpose of your research should be explained clearly to your research participants (e.g. 'to ascertain employee views on

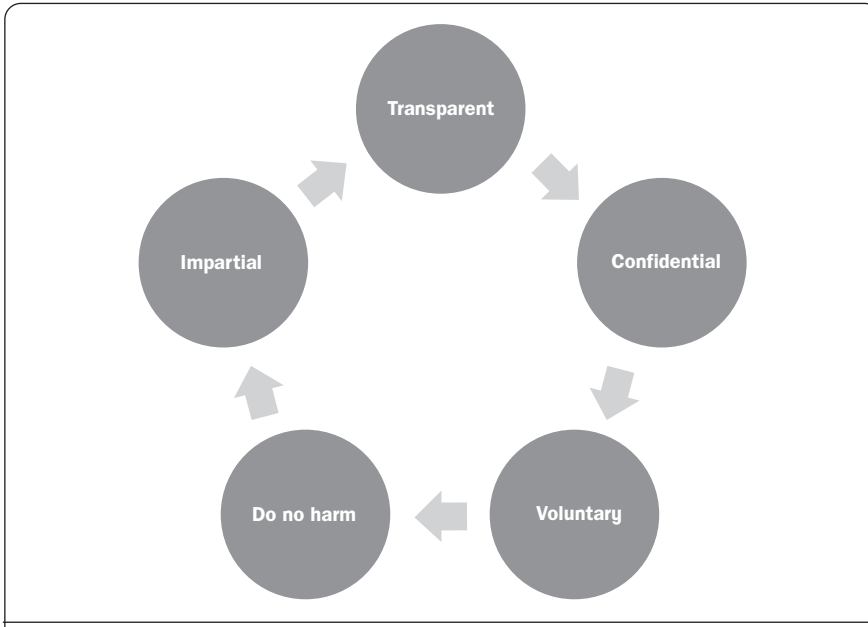


Figure 2.5 Core ethical research principles

whistleblowing'), and how you will conduct the primary research (e.g. interviews) together with the intended use of your findings (e.g. as part fulfilment of a Master's dissertation). Providing participants with a Participant Information Sheet is good practice, showing a professional approach to your dissertation. The Participation Information Sheet can also double up as a consent form (Form 2.1). Participants should only give consent after they have been fully informed of the purpose of your research, how they will be involved, together with any health/risk implications: this is called *informed consent*.

- *Confidentiality*: You must respect the confidentiality and anonymity of participants. If you fail to do so, then you may be in breach of your country's Data Protection Act. By revealing details that can identify individuals, you may also be placing participants at risk.
- *Voluntary*: Participants must not be coerced to become part of your research work and should be free to withdraw at any time.
- *Do no harm*: Your research work should not place your participants in any danger. Equally important, you should not put yourself at risk (if you intend to interview, for example, drug addicts or criminals, then you need to seek professional advice on safety precautions).
- *Impartiality*: If you are connected to the research participants in any way (e.g. fellow students or relatives) or it might be perceived that you could be biased (e.g. you do a case study of an organisation where you work part-time), then you need to declare the nature of that relationship.

Participant Information Sheet and Consent Form

Research Title:

Research Method(s) (e.g. interviews):

Purpose of this research:

Researcher (including contact details):

Participant statement:
The purpose of this research work has been explained to me, including the use to which this research will be put and my part in this research project. I also understand that my details will remain confidential and that my anonymity will be respected.

Signed:
Date:

Form 2.1 Participant Information Sheet and Consent Form

It is normal practice for dissertation students to complete a research ethics approval form prior to commencement of their research. Depending on the ethical issues, approval can be granted at supervisory/departmental level or may require scrutiny by the university's research committee or call for approval from an external body such as the National Health Service (NHS). The answers to the questions on the research ethics approval form will dictate at what level approval is needed.

If your research entails human participation and the ethical issues are straightforward matters where the core ethical principles of *transparency*, *confidentiality*, *voluntary* input, *do no harm* and *impartiality* are not transgressed, then it is normal for approval to be granted at supervisory/departmental level.

If your research necessitates working with 'vulnerable populations' or is likely, for whatever reason, to breach any of the core ethical research principles (e.g. you wish to hide the nature of your research from the research participants so as not to influence their conduct or there is some physical risk to yourself or to the participants), then you should seek guidance and approval from your university's research ethics committee. Figure 2.6 highlights groups that are commonly seen as 'vulnerable populations' in the context of research: children, the elderly, people with learning/communication difficulties, those in custody or on probation, or engaged in dubious/illegal activities.

If your research participants are working for, or are patients of, the NHS (or the equivalent in whichever country the research is conducted), then you will need to submit an application for ethical approval to the NHS National Research Ethics Service (NRES). Indeed, different subject disciplines often offer their own

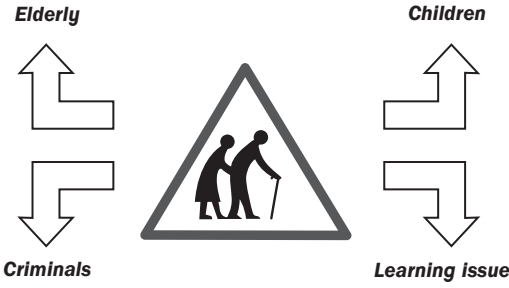


Figure 2.6 Vulnerable populations

guidelines on ethical codes of practice, examples of which include: the Scottish Educational Research Association (SERA), the British Psychological Society (BPS), the British Sociological Society (BSS), the Human Sciences Research Council (HSRC) South Africa, and the American Anthropological Association (AAA). Your first port of call for advice, however, should be to your university.

Appendix B contains an example of a completed dissertation proposal where the student has been required to submit a short, structured essay. Note the list of references at the end identifying the student's key sources. The advantage of writing the research proposal in the shape of a short, structured essay is that the essay itself can then form the basis of the introductory chapter to your actual dissertation.

Checklist

Submitting your research proposal checklist

1 Working title ✔
2 Background information ✔
3 Research aim and objectives ✔
4 Research methods ✔
5 Activity timescale ✔
6 Beneficiaries ✔
7 Ethical issues ✔
8 Reference list ✔

Further reading

Bell, J. and Waters, S. (2018) *Doing your research project: a guide for first-time researchers*. 7th edn. London: Open University Press.

Denscombe, M. (2019) *Research proposals: a practical guide*. 2nd edn. London: Open University Press.
Kara, H. (2018) *Research ethics in the real world*. Bristol: Policy Press.
Punch, K. F. (2016) *Developing effective research proposals*. 3rd edn. London: Sage.
Thomas, G. (2017) *How to do your research project: a guide for students in education and applied social sciences*. 3rd edn. London: Sage.

Summary of key points

- A dissertation research proposal contains a *working title*, *background information*, your *overall research aim*, the *individual research objectives* deemed necessary to achieve your main research aim, an outline of the *research methods* on how you will implement your research, expected *timescales*, potential *ethical issues* (including how they will be addressed), and a list of sources used to inform your research proposal.
- There are two simple formulas, either of which you can use, to help you create a working title. Either *general topic: specific topic* or, if you want to show where you are carrying out your research, *general + specific: example of specific*.
- *Background information* is used to provide context to your research proposal. For emphasis, you can have a separate paragraph/section identifying who will benefit from your research.
- To write your *overall research aim*, think of your research subject in terms of one word, add other words to clarify your research focus, connect them to form a sentence, and then convert the sentence into a formal research aim. You can, if you wish, rewrite your formal research aim as a research question.
- In addition to your overall research aim, you must list the *individual research objectives* that you believe will, when added together, meet your overall research aim. Start each of your research objectives using a keyword (*identify*, *assess*, *explore*, etc.) that indicates the type and depth of study for each research objective. You can, if you wish, formulate your individual research objectives as research questions.
- You will also need to outline your *research methods*, i.e. how you intend to carry out your research, e.g. review of relevant literature and/or collection and analysis of empirical data.
- Include in your research proposal a *timescale* indicating how long you expect each research activity to take. You can illustrate your timescale using either a simple table or, more interestingly, a chart (e.g. a bar chart or a Gantt chart).
- In your proposal you need to comment on any *ethical issues* that may arise. If you are implementing your own practical research, you should behave ethically towards your research participants. You should adhere to the five core ethical principles of *transparency*, *confidentiality*, have *voluntary* research participants, *do no harm*, be *impartial*, and meet any additional code of practice set down by your university or external body.
- List your key sources in a *Reference list* (or Bibliography if you prefer).

Chapter 3



Preparing for your dissertation

• Getting comfortable • Creating a dissertation template • Supervision: roles, responsibilities and meetings • Dealing with feedback • The dissertation marking scheme • An emotional journey • Checklist • Reference • Further reading • Summary of key points

This chapter offers advice on how to get comfortable doing your dissertation work, highlights the usefulness of a dissertation template, clarifies the nature of the relationship between supervisor and student and explains how to get the best out of supervision meetings, advises you on how to deal with feedback, introduces you to the notion of marking schemes, and concludes by highlighting the ups and downs experienced by all dissertation students at one time or another, with the message that it is an emotional journey as well as an academic one – so be prepared for the ride!

Getting comfortable

You need to find a place where you will feel comfortable doing your dissertation. That may be a room in your flat, the university library, or even a favourite café. You want to get into the habit of going to the same spot to do your dissertation. In that way, your brain will associate a particular place with your dissertation work.

Next, decide when is the best time for you to do your dissertation. That may be on a daily basis, or every second day, or what suits you best. Try and be consistent. Allocate a particular time to your dissertation session, e.g. one hour – that will force you to concentrate. It is much better to do a little often than a lot once in a while: the former keeps your dissertation ticking along nicely while the latter will have you forever playing catch up (and if you miss one of your 'big' sessions, that will put you under pressure).

Set clearly defined and achievable goals for each dissertation session. For example, you might want to spend one session just working out a title for your dissertation, another to write out your research aim and objectives, another to read a particular journal paper, another to write up part of your introduction, and so on. Setting and achieving mini goals will stop you messing about aimlessly, wondering what to do.

The combination of *place*, *time*, and *goals* will give you a disciplined approach to your work. It is that discipline that will provide an excellent platform for tackling each stage of your dissertation. If you are comfortable with where you will be working on your dissertation, when you will be working, and what you will be doing, then you can move forward with confidence.

Much of your work will be on writing the chapters that form your dissertation. Try and write your dissertation chapters as you go along, rather than leave all the written work to the last minute. The purpose of this book is to help you write those chapters. To that end, and to add focus to your dissertation sessions, the next section is on creating a *dissertation template*.

Creating a dissertation template

Once your research proposal has been approved, create the cover pages for each of the main chapters that you expect to appear in your final submission. Collectively this is called a *dissertation template*. It immediately provides a level of cohesion and coherence to your dissertation at a meta level.

A dissertation template will typically include the cover pages shown in Figure 3.1, although the headings and arrangement of pages may change depending on your dissertation and the guidelines set out in your dissertation handbook.

You can store all these pages in the one word-processed document or in separate documents if you wish or mix and match as you see fit. For your core writing chapters – Chapter 1 Introduction, Chapter 2 Literature Review, etc. – you could create a style sheet. That's where you create one chapter in a certain style (headings, core text, spacing, page numbers, headers/footers) and then copy that style into your other core chapters.

As you advance through your dissertation journey, complete each section in detail. On a practical level, it will make it easier for you and your supervisor to appreciate, at a few glances, how your dissertation is progressing.

Supervision: roles, responsibilities and meetings

Supervisors are a great resource, but you need to know how to use that resource. To do that, you need to be aware of the different roles and responsibilities in the supervisor–student relationship and how to get the best out of supervision meetings.

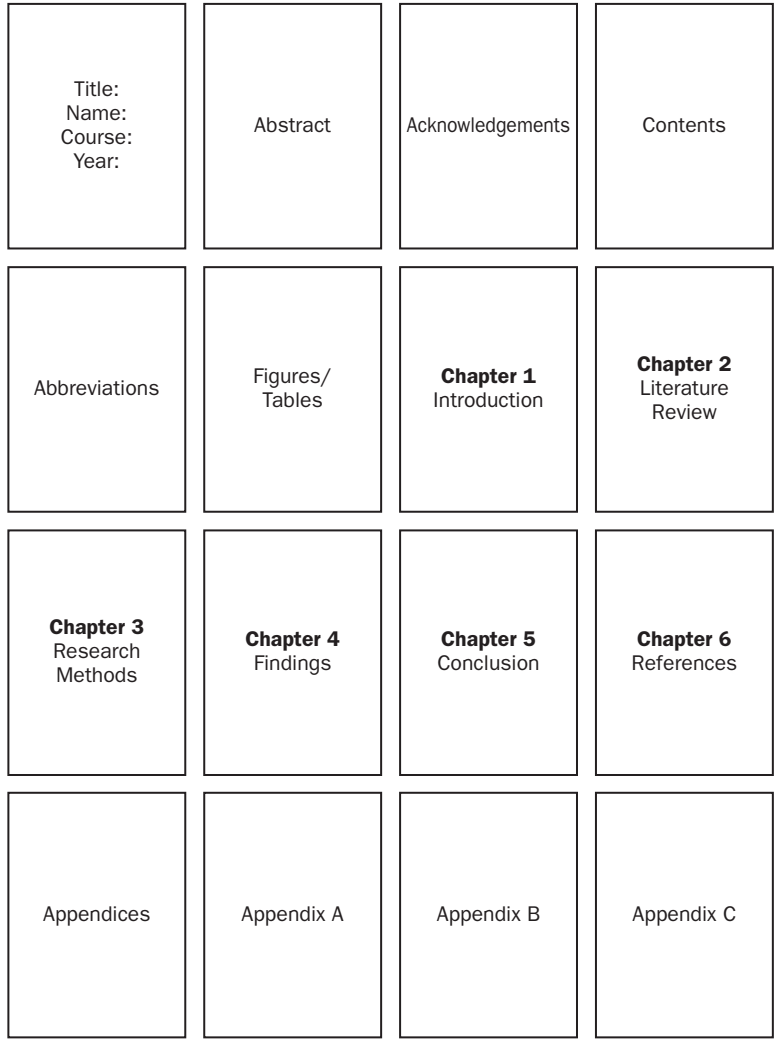


Figure 3.1 A dissertation template

Roles and responsibilities

There is a difference between a *role* and a *responsibility*. A role refers to an expected function. For example, the role of a teacher is to educate while the role of a student is to learn. With roles, or functions, come responsibilities. In the context of your dissertation, your supervisor will have a specific role (or roles) and related responsibilities, as will you.

A major role of your supervisor is to help you realise your dissertation. Your supervisor will do that by acting as your expert guide and 'critical friend'.

As such, it is probably more helpful to view your supervisor as having a twin role: someone who will be both inquisitor – in the nicest possible sense – and adviser. When your supervisor asks questions about your work, it is not in an attempt to 'catch you out' but in order to engage you in discussion with a view to offering advice in line with your intentions.

It is normal practice for universities to provide supervisors with a list of supervision responsibilities. Experienced supervisors are well aware of their supervisory duties but it is a gentle reminder of what their university and students expect of them. These expectations form the ground rules upon which supervision is based and usually include the following responsibilities:

- to offer advice on the appropriateness of your proposed research;
- to give guidance on the standard of work necessary to pass a dissertation;
- to meet with you regularly to discuss your work-in-progress;
- to provide constructive criticism;
- to give timely feedback;
- to warn you if you are in danger of failing;
- to treat you fairly and with respect.

What part do you – the student – play in the supervisor–student relationship? It is your dissertation, so you take the lead role. Your role is to do the dissertation. This does not mean that you have complete freedom to do what you want, when you want. Rather than *complete freedom*, what you have is *positive freedom*. Complete freedom is an abnegation of your supervisor's responsibilities and your responsibilities; positive freedom is a reaffirmation of your lead position within an agreed framework. With freedom comes responsibility. It is your responsibility to do the following:

- familiarise yourself with the dissertation guidelines;
- agree on a suitable research topic with your supervisor, including timetable of activities to complete your dissertation on time;
- arrange a schedule of meetings with your supervisor;
- meet with your supervisor regularly;
- participate in supervision meetings (discuss, ask questions, give views, etc.);
- submit work regularly for review;
- submit your final dissertation on time;
- submit a dissertation that is your own work.

Dissertation supervision is a partnership between supervisor and student. The supervisor–student relationship is based on reciprocity: for it to work, you need to cooperate mutually and to do that you need to appreciate each other's roles and responsibilities.

When the roles and responsibilities of supervisor and student are recorded in the student handbook, they form a contract between the institution and the

student. Some universities have a formal dissertation contract, requiring the signatures of student, supervisor and the director of studies. Dissertation supervision contracts can differ in size and detail. Where they exist, they will at least contain the names of the supervisor(s) and student, a working title, focus of study, time plan, date supervision begins, confidentiality clauses, and the signatures of student and supervisor. They may also include details of any training you require to complete your dissertation. The roles and responsibilities of supervisor and student may appear in the formal contract. Appendix D contains a sample Supervision Contract.

Meetings

Meetings with your supervisor are excellent opportunities for you to seek expert guidance. You need to make the most of these meetings. You will be better placed to advance your dissertation if you understand how to take advantage of meetings with your supervisor. When you arrive for your first meeting with your supervisor, *come prepared* and *armed with questions*. State quite clearly your area of study, overall aim and related objectives, including a rationale for your chosen topic. Also, present your supervisor with a working title for your dissertation (this can change as your work progresses), for example:

> The title of my dissertation is xxxx and my overall aim is to study . . . with a view to getting a deeper understanding of . . . The reason I want to study this area is because preliminary literature review findings indicate . . . For example, Burns in his report published in 2020, titled . . . argues that there is a need . . .
>
> The title of my dissertation is 'The Development of an Algorithm to Facilitate Software Testing in a Mobile Environment' and my overall aim is to study the appropriateness and effectiveness of current software-testing paradigms in such environments, with the aim of developing an improved algorithm to meet the needs of mobile computing software developers. To do that, I've set myself three tasks . . .
>
> The reason I want to study this area is because new technologies are being produced at an alarming rate, becoming smaller and more personalised, and as this is taking place there is an increasing need to ensure that those who are developing new mobile technologies do so using relevant and effective testing algorithms, otherwise the security of the products may be compromised. Indeed, a number of researchers have expressed concern about this very issue . . .

Your supervisor will be looking at your initial proposal in terms of:

- What is it you want to do?
- Are the objectives appropriate and achievable in the timescale?

Ask for your supervisor's opinion on your dissertation topic (after all, your supervisor may also be marking your submitted dissertation): 'What do you think of my overall aim?'; 'Are my objectives clear to you?'; 'In your view, are my objectives appropriate?'; 'Do you think I will be able to do them in the time available?' In other words, 'Is my proposal realistic?'.

Prior to each meeting, email your work-in-progress to your supervisor. If you do not do so, then much of your supervision meeting might be a very silent affair, with you waiting patiently until your supervisor has finished reading your work. Avoid sending irritatingly mysterious emails, where you do not identify who you are, or emails that assume a casual level of intimacy that is inappropriate. Keep your emails friendly but professional, informative but brief. Your supervisor will have many students to deal with, so always identify who you are, together with your dissertation title. If you have a particular issue that you would like addressed before, or discussed during, your supervision meeting, then state this in your email. By emailing your ideas, work-in-progress, specific problem areas, etc., you are giving your supervisor time to prepare for your meetings.

At each meeting summarise your latest work and seek specific feedback, e.g. request advice on issues that concern you. Stay clear of this howler, however: 'I can't find anything on this subject!' Every year there is one student who arrives at meetings only to complain: 'I can't find anything on this subject!'. Declaring 'I can't find anything on this subject!' gives the impression of laziness on your part and a lack of serious intent about your dissertation. If you really are struggling to find information on your dissertation topic, then at least tell your supervisor the type of information you sought and where you looked for this information. Establishing a working relationship with your supervisor requires an honest attempt to engage with the dissertation process.

For future meetings with your supervisor, adopt a similar approach: *show your work-to-date* and *ask questions*. If you have created a dissertation template (as described in the previous section), then you can incrementally build up your work, permitting your supervisor to quickly and conveniently assess your progress. Unfortunately, there are students who will arrive at meetings with no work to show, ask no questions, and wait for their supervisor to tell them what to do. Don't be that student.

Meetings with your supervisor should be looked upon as a chance to gauge your supervisor's opinion about your work and to seek corrective advice when things are going wrong. Every meeting with your supervisor, if handled properly, could be saving you marks that you would otherwise have lost. And remember this – students who rarely turn up for meetings rarely pass. One other thing – if you cannot make a meeting with your supervisor, then send an email as early as possible (not five minutes before the meeting) explaining the reason for your non-attendance. That is only good manners; and you should expect the same courtesy from your supervisor.

These meetings are not interviews, so do not view them as such. Your supervisor genuinely wants to know how your work is progressing in order to

pinpoint areas where you might need help, and this requires the two parties to communicate with one another. The only way you can start to achieve a decent rapport with your supervisor, and communicate dissertation issues, is if you arrive at meetings prepared and take on board any advice given.

Form 3.1 is a basic form that you can complete to help you prepare for each meeting.

SUPERVISION MEETING	**Date:**
Summary of work-to-date:	1. 2. 3. 4. 5.
Focus of meeting:	
Questions to ask, issues to discuss:	1. 2. 3. 4. 5.

Form 3.1 Preparing for a supervision meeting

It will also form a record of what you wanted to cover at each meeting. What is of equal importance, is the feedback you get from your supervisor and how you react to that feedback.

Dealing with feedback

In the context of your dissertation, feedback refers to your supervisor's response to your work. There are two ways that you are likely to receive feedback: (1) face to face and (2) by email. Regardless of the form of that feedback, whether it's given to you verbally or in writing, it should meet certain criteria to be of any use to you, as shown in Figure 3.2 (Biggam, 2020, p. 140). The criteria are called the 5Cs:

- *Clear*: you need to be able to understand your feedback.
- *Concise*: feedback that is to the point is preferable to feedback that is long-winded.
- *Consistent*: the advice should appear in familiar format and should not contradict previous advice.
- *Convenient*: it should be given in a way and time that benefit you.
- *Constructive*: it should provide commentary on what is going well and what isn't, with suggestions on a way forward.

When you get feedback from your supervisor, you should summarise that feedback in a way that you can understand and use to improve your work. Let's

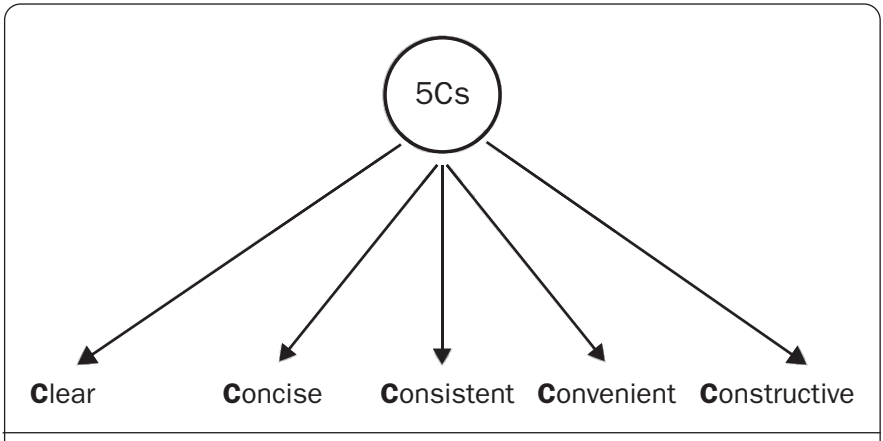


Figure 3.2 Feedback standards: The 5Cs

imagine that you have just come out of a meeting with your supervisor. While it is fresh in your head, you should summarise the things that your supervisor liked about your work (or at least had no issue with), the things that didn't go so well, and suggestions for improvement (or for the next meeting). Form 3.2 is a form that you can use to record your supervisor's feedback.

You can create your own word-processed version and fill it in after each supervision meeting. Change the side headings on the form as you see fit. Interpreting and summarising feedback will force you to think about what your supervisor is telling you – what's going well, what isn't, and what you need to do. If there is anything that you do not understand, then get back to your supervisor for clarification.

Adopt a healthy response to feedback. Supervisors are as excited as you when you pass your dissertation. Advice given should be seen in that light. They are trying within the parameters of academic practice to help you as much as possible. When they point out errors on your part, they are in effect telling you what you need to improve to avoid losing silly marks. Even when your work is of a good standard and you feel that your supervisor is 'criticising' it, it is done with the hope that you can go one step further to get even higher marks!

Do not underestimate the value of feedback. It is there for your benefit, not for your supervisors, so take it for what it is – expert commentary designed to help you in your dissertation journey.

RECORD OF FEEDBACK	**Date:**
Discussed:	
Ok:	
Not ok:	
To do:	

Form 3.2 Record of feedback

The dissertation marking scheme

When an examiner starts to mark your written work, it is normally with reference to a 'marking scheme'. Not all departments have formal marking schemes, but most do. Marking schemes are used for a number of reasons:

1 A marking scheme introduces guidelines that all staff can use and against which student dissertations can be judged, ensuring consistency of approach and fairness to students.
2 Marking schemes allow institutions to keep a record of student work, including assessment criteria, so that external auditors can see that the means of assessment and student work are of an appropriate standard befitting a university.
3 Finally, marking schemes are there to assist *you*, the student, in understanding how your work will be assessed.

> **! A common mistake**
>
> Too often, students develop their dissertation without taking cognisance of the marking scheme. This is stupid. You are being tested that your dissertation meets pre-determined criteria, so why ignore those criteria when you are completing your dissertation?

What does a marking scheme look like? Marking schemes normally link a particular range of marks with an expected standard of achievement. In its simplest form, a marking scheme equates a marking range against the following types of pass or fail (Table 3.1).

Table 3.1 Generic marking scheme

Mark range (%)	Result
70+	Distinction
60–69	Very good pass
50–59	Pass
40–49	Borderline pass
0–39	Fail

There are variations of the marking model above, both in terms of the grouping of marks and the labels used, including what constitutes a pass. Most universities will stipulate the criteria to achieve a mark in a particular range. Those criteria will normally be found in your dissertation handbook or on your department's web

page. For instance, to gain a mark of 70+, or whatever the department deems meritorious, a statement not dissimilar to the one below will appear opposite the mark to indicate the criteria that must be met to achieve that award:

> 70 and above: **Distinction**. Work of publishable quality reflecting outstanding knowledge of material and critical ability, presenting a coherent and compelling argument.

The criteria for the other range of marks should also be listed. Table 3.2 provides an example of the sort of marking scheme that you might see:

Table 3.2 Example marking scheme

Mark range (%)	Result
70+	**Distinction.** Work of publishable quality reflecting outstanding knowledge of material and critical ability, presenting a coherent and compelling argument.
60–69	**Very good pass.** Focused piece of work, reflecting a very good understanding of material and showing ample evidence of critical assessment. Unpolished in parts.
50–59	**Pass.** A satisfactory effort, demonstrating sound knowledge of material and some evidence of critical evaluation, but mainly descriptive in nature.
40–49	**Borderline pass.** Limited knowledge of subject and use of core material. Unconvincing in parts.
0–39	**Fail.** Lack of understanding of subject matter, no focus, limited sources used, and poorly presented.

Bear in mind that 'Distinction' can mean different things to different institutions, with marks altered accordingly. Similarly, 'Very good' for one institution might be accorded a marking range 60–69 by one university, while another places it in the range 70–79, with the criteria altering accordingly. Also, rather than provide a range of marks, some institutions might allocate marks according to what they consider to be the assessable elements of the dissertation. Table 3.3 is an example of this practice:

Another institution may adopt a different marking sheet, one that allows markers to mark elements of the dissertation out of 100 but weight the different parts according to their perceived importance, as in Table 3.4.

Thus, each of the elements would be marked out of 100, then multiplied by their respective weighting to arrive at a final mark for that element. So, in this scenario, if a student scored 70 per cent for Research Methods and Research Methods had a weighting of 0.2 (i.e. Research Methods was deemed to be worth 20 per cent of the dissertation mark), then the final mark for that element would be $70 \times 0.2 = 14$, and so on. Table 3.5 shows a completed example of the weighted marking sheet in Table 3.4.

Table 3.3 Completed dissertation marking scheme

Dissertation element	Marks allocated
Aim and Objectives	10
Literature Review	15
Research Methods	15
Findings and Discussion	20
Conclusion	15
Referencing	5
Abstract	10
Structure and quality of written English	10
Total:	100

Table 3.4 Weighted marking sheet

Aspect	Mark (%)	Weight	Weighted mark
Abstract, Introduction	_____	0.1	_____
Literature Review	_____	0.2	_____
Research Methods	_____	0.2	_____
Findings/Discussion	_____	0.3	_____
Conclusion	_____.	0.1	_____
Referencing, presentation	_____	0.1	_____
		TOTAL (out of 100)	_____

Table 3.5 Completed weighted marking sheet

Aspect	Mark (%)	Weight	Weighted mark
Abstract, Introduction	66	0.1	66 × 0.1 = 6.6
Literature Review	60	0.2	60 × 0.2 = 12
Research Methods	70	0.2	70 × 0.2 = 14
Findings/Discussion	76	0.3	76 × 0.3 = 22.8
Conclusion	76	0.1	76 × 0.1 = 7.6
Referencing, presentation	68	0.1	68 × 0.1 = 6.8
		TOTAL (out of 100)	69.8 = 70

Irrespective of the marking scheme used by your institution, get hold of the marking scheme before you start your dissertation. Make sure that you understand what the criteria for each band means. Ask your supervisor if you are in any doubt. Aim for the top range of marks. As you complete each part of your dissertation, think like a marker and judge that part of your dissertation against the stated marking criteria. In that way you will begin to appreciate that the dissertation is not about completing a dissertation – it's about completing a dissertation that is to be judged against set criteria.

An emotional journey

Doing a dissertation can be an emotional rollercoaster of a ride. Some days you will be on a deserved high. Some days you might feel down. Supervisor praise, or criticism, that library book that you can never get hold of, an agreed interview with a research subject falling through, panic because your friends are so far ahead with their dissertations, delight at finding someone else to interview. Sometimes the reasons for your emotional disposition might not even have anything to do with your dissertation. Domestic problems, personal relationships, family concerns, health, future employment prospects, all are examples of external issues that can knock your studies temporarily off course.

Here is something you need to understand from the very beginning: ALL dissertation students experience ups and downs in their dissertation journey. Recognising that other students are encountering similar problems, and have done so since the dissertation was first invented, is comforting because that means that the problems are inherent in the dissertation journey, not you.

Although stressful situations will pop up here and there during your dissertation journey, if that stress becomes excessive, you need to seek professional help immediately. Every university has a counsellor trained to listen and offer advice – so make use of their services.

There are practical benefits to keeping your university informed of any issues that are having a negative impact on your dissertation work. As well as directing you to specialist help, the university will liaise with your supervisor in an attempt to keep you on track and, importantly, will treat any future request for an extension to your submission date sympathetically. Your personal health is more important than your dissertation: you can always defer your dissertation; the same cannot be said for your health.

> **! A common mistake**
>
> At the start of the dissertation it is easy to think that you have all the time in the world. No, you don't. As the deadline looms, it is not uncommon for students to panic at the end of a dissertation because they are running out of time. The days and months will fly by before you know it. The key to avoiding this panic is planning and discipline. Create your dissertation template, complete it as you go along, prepare for supervision meetings, act on supervisor feedback, and keep to your timetable.

Below are typical issues that can upset students, predominately dissertation-related. Included is helpful commentary.

- '*I don't know where to start*': First of all, find a place to do your work in comfort. Next, create a dissertation template (see 'Creating a dissertation template'). Work out a timetable for core activities. Pin that on your bedroom wall or stick it to the fridge door. Arrange to speak to your supervisor to discuss your research proposal. You have already started!
- '*I didn't get the supervisor I wanted*': Supervisors are allocated on the basis of best-fit, and availability, not favouritism. This is a fairer system than allowing students to select their supervisor or, for that matter, permitting supervisors to cherry-pick their dissertation students. There have been occasions when students have felt disappointed or apprehensive about their allocated supervisor, only to appreciate further down the line the deliberate thought gone into supervision selection. The supervisor–student relationship requires both parties to be enthusiastic and engaging from the outset, so you need to set aside any initial disappointment and buckle down to make the partnership work. Think positively and trust in your supervisor's experience.
- '*I want to change my supervisor*': Think very carefully before making a request for a change of supervisor. Not liking your supervisor is not a valid reason; nor is preference for another supervisor. The main reasons that normally justify a change of supervisor are: (1) incompetence on the part of the supervisor or (2) a complete breakdown in the supervisor–student relationship. On the issue of competence, you would need to argue that either the supervisor is not knowledgeable in your subject area or lacks ability to supervise a dissertation (e.g. is confused about the dissertation process). For an irretrievable breakdown in relations, you need to provide evidence, in the form of a timeline of accumulative incidents, where issues raised were not addressed to your satisfaction and, collectively, are to your serious disadvantage. If either of points (1) or (2) arises, then you are perfectly entitled to request a change of supervisor.

  However, if you are thinking about changing your supervisor, be sensible and adopt the following staged process. Speak informally to your supervisor in an attempt to reach an amicable resolution (it may be the case that friction has been created as a result of a mutual misunderstanding). If that fails, speak informally to whoever is in charge of the postgraduate dissertations for your programme (i.e. do not rush into a premature formal complaint). If that fails, then make a formal appointment to speak to the head of department and/or a student academic advisor to progress your concerns. On each occasion, do not resort to petty, personal accusations – be polite and professional, but firm. Remember, you are entitled to a competent and supportive supervisor.
- '*I can't find anything on my dissertation topic*': You have been looking for a book with the name 'My Dissertation' writ large on the front cover. Such a book does not exist. Do not Google your dissertation title and expect to be

inundated with perfectly formed information on your complete dissertation topic. You may need to think tangentially. If you are unable to acquire literature sources on, for example, the barriers to e-Learning in universities, then look up sources on e-Learning in universities and from there you may come across an author discussing the barriers. From that source you may get leads to other sources, and so on. You will need to explore the possible places where this information might reside: other student dissertations, departmental library, internal university library databases, external university library databases, books, conference proceedings, lecture notes, etc. Write and reference as you go along. You will soon build up a healthy collection of material. Initially, you will make slow progress but you will soon become adept at recognising what to search for and where to search.

- '*I've got too much information*': You need to be brave and only retain material that is relevant to your specific research objectives (or research questions). If you have picked up a book or a journal paper or an internet article that is interesting but irrelevant, then ditch it. You do not have time to be distracted. Get into the habit of skim reading literature to determine relevance, ruthlessly binning anything that does not obviously align with any of your numbered objectives. Literature that repeats what you already have (e.g. barriers to e-Learning) can be used to emphasise agreement/disagreement between authors but at some stage you need to start writing! When you have collated enough information to write meaningfully on one aspect of a chapter within your dissertation template, then that is when you begin. For example, if there is a chapter in your dissertation entitled 'Drivers and Barriers to e-Learning', then once you have collected material on the drivers, start writing.
- '*I don't know how long this chapter should be*': Think sensibly. For instance, if you are attempting a traditional dissertation that has a theory element followed by your own empirical work, then the bulk of the marks tend to be distributed between the Literature Review, Research Methods and Discussion/Analysis of any empirical work, with the Introduction and Conclusion securing fewer marks. If there is a formal written marking scheme, detailing the marks allocated to the separate parts of the dissertation, then get hold of it. That will confirm the weighting of the marks, and hence give you a good guide to the weighting of your word allocation. If your Literature Review is worth, for example, 25 per cent of the marks, then devote roughly 25 per cent of your overall word count to your Literature Review, and so on. Check your dissertation handbook for your university's guidelines and confirm your strategy with your supervisor. Also, have a look at past dissertations to get a measure of word distribution.
- '*I'm not sending my work-in-progress until it is perfect*': Your supervisor is looking for your work-in-progress, not perfection. You can tidy up aspects of your written language later. As long as the work that you show your supervisor reflects agreed expectations and allows for meaningful discussion, you will be making progress. The benefit of timely feedback far outweighs any pleasure you take from producing a more polished chapter. Besides, you

can always tidy up your written work after meeting your supervisor; more so given feedback on the substance of your work-in-progress.

- '*I'm writing in a language that is not my mother tongue*': Do not fret. Your university has deemed your language skills to be good enough for you to embark on a Master's course. Thousands of non-native speakers obtain Master's degrees every year. Ability in English (or whatever language is native to the country in which your university resides) is rarely a predominant reason for failing a Master's dissertation – in some marking schemes, 'skill in language' may only form 5 per cent of the overall mark. Furthermore, supervisors do make allowances for those who are not native speakers. Nevertheless, if you, or your supervisor, are concerned about your language skills, then get hold of past dissertations to gauge expected standards and speak to your academic counsellor about acquiring additional support.
- '*My supervisor keeps criticising my work*': That is your supervisor's job! Do not take it personally. You would be more upset if your supervisor offered no criticism and then, without warning, failed your final submission. There are two reasons why your supervisor will 'criticise' your work: (1) it is an attempt to get you to defend your work and so start an intellectual debate, and (2) to highlight a defect in your work and allow you to take corrective action. Respond enthusiastically to the first type of 'criticism' and for the second, more serious type, be glad that your supervisor is keen to point out how to improve your dissertation. Criticism has negative connotations – try instead to view comments by your supervisor as 'helpful interjections'.
- '*Other students are so far ahead with their dissertation*': No, they are not. Students are not the best judge of their own progress; even less are they best placed to comment authoritatively on the progress of other students. Go at the pace that you have agreed with your supervisor and which suits your temperament and needs. If your supervisor is happy with your progress, then you should be too.
- '*My friend's supervisor is giving different advice from my supervisor*': Your friend would then be able to make the same comment about your supervisor! Neither you nor your friend need to panic. Your friend's dissertation is different from your dissertation, so the advice will be different. Your friend's supervisor is not marking your dissertation. Ignore the advice given to your friend and listen to your own supervisor.
- '*I lack confidence and have low self-esteem*': You are as good as any student on your course. It is a strange phenomenon, but it is commonplace for highly educated students on a postgraduate course – the top strata of educated citizens in society – to lack confidence in their ability to complete a dissertation. The author of this book recalls a mature student, constantly predicting dissertation doom. Another student would regularly leave the dissertation meeting upset at the merest hint of feedback that highlighted areas that required improvement. Both students were incredibly hard working but lacked confidence in their own abilities for long spells (even when receiving regular encouragement). Both students received a distinction and

deservedly so. The huge smiles on their faces at graduation reflected a wonderful personal triumph for both of them, from nervous students to proud researchers. You are travelling a path that many have gone before. They succeeded and so should you.

- '*This evening job is exhausting me*': There are many positive benefits to part-time student employment, not least of which is money in your pocket. If, however, your work is affecting your studies, then consider leaving your part-time work. Your student job is temporary while your qualification is for life. If you need your student job to make ends meet, or you consider the benefits far outweigh the disadvantages, then try to come to an arrangement with your employer in terms of a more favourable work–study balance. Alternatively, look for another part-time job that better accommodates your studies. For example, most universities offer part-time work to their own students (in the students union, academic departments, international office, sport, web team, business development, conference, widening access, finance office, and so on). Your students union will give you excellent advice.
- '*My boyfriend/girlfriend is so demanding of my time*': Perhaps your boyfriend/girlfriend is not aware of the effort required to complete a Master's dissertation. Make it clear to your partner from the outset that your Master's dissertation is important to you, and your career prospects, and that to succeed with your Master's dissertation you will need to devote time and space to your studies on a regular basis. Setting expectations for others as well as yourself helps everyone appreciate what lies ahead.
- '*I have a disability. How can my university ensure that I am not disadvantaged?*': Universities are particularly keen to ensure that no student is disadvantaged in their studies and will make every effort to accommodate those with a physical disability, long-term health or mental condition, or learning difficulty. You may be able to apply for financial assistance, in the form of a disabled student's allowance. This could help you acquire, for example, specialist software, a note-taker or reader, the cost of Braille paper, and extra travelling costs. You need to make your university aware of your disability so that you can receive the help you need.
- '*I'm not sure how to carry out my empirical research*': First of all, understand the main research strategies (case study, survey, experiment, action research, historical research, etc.) available to you, including data collection methods (interviews, questionnaires, observation, etc.). Then, decide what strategy and data collection method(s) best fit with your research. Discuss the options openly, in a relaxed way, with your supervisor. Check out past dissertations in your subject area to see the choices made by other students (importantly, note how the students justify their choices). See Chapter 7 'Research methods' for details.
- '*Oh no, I can't find anyone to interview for my empirical research*': That is probably because you have left the practicalities of data collection to the last minute and expect others to compensate for your lack of forethought. Once you have chosen your research methods, you need to start making

solid arrangements to collect your data. Calling senior staff up one week before you want to interview them is unlikely to meet with much success. Agree a date, time, duration and purpose well in advance of your proposed data collection periods. Every so often remind your research participants of their agreed contribution to your empirical research, in case they can no longer be available and you need to make alternative arrangements.

- '*My supervisor knows that I am knowledgeable, so in my final submission I don't need to write down all my main arguments/ideas in any great detail*': Yes, you do. You get marks for what you write, not for what you said in some past conversation. The marker – very often your supervisor – allocates marks, not from memory, or hearsay, but from the written evidence presented in the shape of your final submission. Gaps in your submitted arguments/ideas mean gaps in your marks.
- '*This dissertation work is draining me. I'm so tired*': The dissertation journey is a long haul and the constant effort can take its toll, if you are not careful. Fatigue lowers the power of your faculties and can make you susceptible to illness. Take a break! Sit in a coffee shop and watch the world go by, visit a gallery, go for a walk in the park, even take a short holiday. Do something different. Join a boxing club – that will waken you up! If you are tired, then you need to recharge your batteries.
- '*I'm glad this dissertation is coming to an end. I'll just bash off a quick conclusion*': No! A hasty conclusion will diminish the worth of your dissertation and reduce your overall mark. Put in as much effort and enthusiasm into your conclusion as you did for your introduction. Start your dissertation with a bright flourish and end it in a victorious parade. See Chapter 9 'Concluding your dissertation'.
- '*I'm running out of time to complete my dissertation*': At the start, most students think they have all the time in the world to complete their dissertation. In that respect, you will probably be no different; but before you know it, the days become weeks, the weeks become months and the final submission date will be staring you in the face! Even the top students are taken aback by how quickly the end-date changes from a distant deadline to sudden reality.

  To minimise the risk of delaying key milestone activities until it is too late to do yourself justice, set down a timetable of activities at the beginning of your dissertation journey. Supervisors can always spot a hurried dissertation: the introduction is usually well written, the literature review is inconsistent in depth and theme, the research methods chapter is skeletal and unconvincing, the write-up is superficial and lacking detailed analysis (partly because the empirical research was minimal), and the conclusion ends abruptly with little attempt to tie everything together.
- '*I've got all the time in the world to do my dissertation*': No, you haven't. See 'I'm running out of time to complete my dissertation'.
- '*I won't be able to complete my dissertation in time, so I'll just hand it in late*': Be careful. An unauthorised late submission will incur a penalty. Some universities may even award a mark of zero. An authorised late submission

may still result in a penalty unless the reason for the request is the result of a factor beyond your control, such as ill health. Under such circumstances, make your request timely and provide supporting documentation. Bad time management is not a valid reason for a penalty-free late submission; if it were otherwise, then the concept of a formal submission cut-off date would be entirely meaningless and unfair on those students who stick to the rules.

The issues listed above are not there to scare you or place a negative slant on the dissertation journey; rather they are highlighted to present a realistic picture of the feelings that you might experience as you progress through your dissertation, with the key message that you are not alone. Supervisors recognise this and are there to help you, and not just academically. They can be a great source of emotional support and if they can't help you, then they know people who can. Producing a Master's dissertation is an intellectually enriching experience, but you ought to recognise that there may be times when you need emotional as well as academic support.

Being prepared will set you up nicely for your dissertation journey. Chapter 4 covers two related areas that will prepare you further: referencing and plagiarism. Referencing is at the heart of academic work. The next chapter teaches you how to cite your sources and create a reference list. It also raises the problematic issue of plagiarism, including the relatively modern concept of self-plagiarism.

Checklist

Preparing for your dissertation checklist

1 Found a comfortable place to do my dissertation ✓
2 Created my dissertation template ✓
3 Understand role and responsibilities of my supervisor ✓
4 Understand my role and responsibilities ✓
5 Know how to prepare for supervision meetings ✓
6 Know how to summarise supervision discussions ✓
7 Know how to deal with feedback ✓
8 Understand marking scheme ✓
9 Aware of common issues students encounter ✓
10 Know where to get help if I need it ✓

Reference

Biggam, J. (2020) *Succeeding with your university essay: a step-by-step handbook*. London: Open University Press.

Further reading

Cottrell, S. (2019) *The study skills handbook*. 5th edn. London: Red Globe Press.

Summary of key points

- It is important that you find a place where you will be *comfortable* doing your dissertation.
- A *dissertation template* is a useful way of structuring your dissertation. It gives a bird's-eye view of what lies ahead, provides a sense of direction and discipline, and is a good reference point for you and your supervisor.
- *Meetings with your supervisor* should be constructive and that, in turn, requires you to come prepared with ideas, questions, and your work-in-progress.
- The *role of the student* is to do the dissertation and the *role of the supervisor* is to support the student in completing that task.
- The *supervisor–student relationship* is based on mutual cooperation and respect to allow you and your supervisor to fulfil your respective roles and responsibilities.
- A *Dissertation Supervision Contract* is a legally binding contract between the university and the student on how the supervision will be conducted.
- *Feedback* from your supervisor should be Clear, Concise, Consistent, Convenient, and Constructive. Summarise feedback from your supervisor in a way that helps you to focus on what was good about your work-in-progress, what requires work, and what you have agreed to do before the next meeting.
- *Marking schemes* come in all shapes and sizes. Your marking scheme shows the criteria that you have to meet to obtain a particular mark.
- Completing a dissertation is as much an *emotional journey* as it is an academic one. Be prepared to experience emotional peaks and troughs as you traverse the dissertation landscape. It is a well-worn path. You need to pace yourself, stay focused, show resilience and not panic in the face of adversity, but recognise when to rest and know where to seek additional support.

Chapter **4**



Plagiarism and referencing

• Plagiarism • What is referencing? • In-text referencing • Creating a reference list • Checklist • Reference • Further reading • Summary of key points

This chapter provides a working definition of plagiarism, shows by example different types of plagiarism, explains how to reference, and the need to follow house rules.

Plagiarism

Before we move on to the serious business of how to write your dissertation, starting with your introductory chapter, it is important to pause and learn about the thorny subject of plagiarism and its antidote, referencing.

In the first instance, what counts as plagiarism? It needs to be emphasised that it is your institution's view of what counts as plagiarism that matters most, not the one that is given in this book. Find out what your institution has to say on the issue of plagiarism: what it is – in their eyes – and the consequences. If you are still not sure what counts as plagiarism, then be proactive and ask your dissertation supervisor to give you examples of plagiarism.

Defining plagiarism is not an abstract, academic exercise: how an institution views what counts and does not count as plagiarism can impact not only on a student's future career – your future – but also on an institution's reputation. With reference to your dissertation, here is a working definition of plagiarism (we will alter it later):

> Material, or ideas, that appear in your dissertation that are not yours but which you fail to acknowledge.

If you use other people's material (e.g. words or diagrams) or ideas (e.g. theories), then you should acknowledge whose material or ideas they are, and where you got them. An obvious example of plagiarism that would meet this definition is where you copy a complete chapter from a book and submit it as your own work.

What if you copied a paragraph from another source, word for word, and failed to cite the source. Is that plagiarism? For example:

> *Writing an essay is a journey. Like any journey, you need to know how to prepare for what lies ahead: where to start, where you want to end up, the route that best meets your needs, and how to deal with obstacles. The alternative is to start your journey without any planning, meander about here and there, asking people you meet along the way if you are on the right track, and hope that the place you are looking for will suddenly appear over the horizon.*

The source (Biggam, 2020) is not acknowledged; nor is the text placed in quotation marks. The absence of source information and quotation marks implies personal authorship. Even though it may only form a small part of an assignment, it is still plagiarism.

By the same logic, when you copy one sentence verbatim without acknowledgement, that is still plagiarism. Example:

> *Like any journey, you need to know how to prepare for what lies ahead: where to start, where you want to end up, the route that best meets your needs, and how to deal with obstacles.*

Similarly, if you were to copy part of a sentence into your own sentence, without due acknowledgement, in many people's eyes that would still be viewed as plagiarism. Example:

> When writing an essay, preparation is key: *where to start, where you want to end up, the route that best meets your needs, and how to deal with obstacles.*

A less obvious example of plagiarism is where you acknowledge your source but copy text without using quotation marks, thereby giving the false impression that you are paraphrasing – interpreting someone else's work in your own words – when you are not. Example:

> *Like any journey, you need to know how to prepare for what lies ahead: where to start, where you want to end up, the route that best meets your needs, and how to deal with obstacles* (Biggam, 2020).

Giving the impression that someone else's ideas are your own is also plagiarism. You wouldn't like it if someone took one of your ideas and claimed authorship, so don't do it to others.

In summary, the main types of plagiarism that you need to be aware of include:

1 Copying whole paragraphs word for word.
2 Copying whole sentences word for word.
3 Copying part of a sentence word for word.
4 Copying text word for word – paragraph/sentence/part sentence – and identifying the source, but failing to use quotation marks.
5 Taking someone else's ideas without acknowledging the source.

If an institution defines plagiarism as occurring where '*substantial* unacknowledged incorporation . . .' has taken place, they are in fact implying that a certain level of plagiarism is acceptable. In one sense this is understandable: do you instigate formal proceedings against a student for plagiarising a sentence? It does, however, beg the question as to what an acceptable or unacceptable level of plagiarism is.

One must accept, though, that it can sometimes be difficult to rewrite sentences, particularly short sentences, and to paraphrase in a way that does not lose the gist of what the original text is saying and at the same time does not cross the boundary into plagiarism. This is the problem with paraphrasing: you can unknowingly wander across the divide between receiving praise for skilful interpretation of an author's work to finding yourself accused of plagiarism. Nonetheless, lazy paraphrasing can result in plagiarism and ought not to be encouraged.

There is another type of plagiarism that you should be aware of, and that is *self-plagiarism*. Our working definition only refers to plagiarising the work of others, but you can be charged with misconduct if you plagiarise your own work. For example, if you have submitted an essay and you were awarded marks for that essay, and you then used the same essay, or part of it, in your dissertation without acknowledging that you had used the same material before, then your institution may charge you with plagiarism.

The idea behind self-plagiarism is to get you to be honest about where your material and ideas have come from. Not disclosing that they have appeared elsewhere might be construed as deliberately pretending that what you write is completely new.

Self-plagiarism is a bad habit that can have serious consequences. For example, imagine that later in life you become a university lecturer and that you get a book or a research paper published. Several years on from that, you then get another book or paper published, but with a different publisher, but you use some of the same material in your new book/paper. You might find yourself in breach of copyright if you haven't (1) asked the previous publisher for permission and (2) you haven't acknowledged your previous work. So, if you intend using your own material or ideas that have appeared in a previous assignment of yours, then (1) ask your supervisor for permission to include it and (2) acknowledge your previous work.

Let's now change our working definition of plagiarism to accommodate the concept of self-plagiarism, from:

> Material, or ideas, that appear in your dissertation that are not yours but which you fail to acknowledge.

to:

> Material, or ideas, that appear in your dissertation that (1) are not yours but which you fail to acknowledge or (2) are yours that you have used previously but which you fail to acknowledge.

In this age of easy cut-and-paste, plagiarism is easy to do – but it is also easy to detect. Universities make use of Turnitin (www.turnitin.com), a well-established suite of software programs to help detect plagiarism in student work. The software is more accurately described as a similarity checker, as it simply checks a student's work, once submitted, against its huge database, for similar text. It then produces a colour-coded similarity report, with different colours indicating the degree of similarity (and the source of the original text). It is up to the institution to interpret the results, come to a conclusion, and to decide what to do.

Turnitin can be used as an innovative educational tool, allowing students to submit working versions of an assignment, helping them to appreciate the meaning of plagiarism in its various guises, and allowing them to take corrective action at an early stage. Ask your supervisor about entering drafts of your dissertation to Turnitin. Remember to inform Turnitin to discount quotations and your Reference list before it does its similarity check. Of course, the way to avoid plagiarism is to learn how to acknowledge your sources properly.

How exactly do you acknowledge the work of others, or your own work for that matter? Referencing is the answer. The next section will discuss how to reference the work of others and, to avoid any accusation of self-plagiarism, how to reference your own work. First things first, let's start with an obvious question – what is referencing?

What is referencing?

Referencing is an essential skill that you need to get to grips with early on. A dissertation is an academic body of work. This means that you will have to show that you are well-read in your subject area. To do that, you will be expected to refer to relevant sources. You reference these sources in two places in your dissertation: in the body of your dissertation and at the end of your dissertation. When you cite sources in the body of your dissertation this is called *in-text citation* or *in-text referencing*. You must also inform the reader precisely where to find the sources you cite, and you do so in a Reference list

(or Bibliography) at the end of your dissertation (after your Conclusion and before any appendices you might have).

A Reference list is a list of all the sources that you have cited explicitly in the body of your dissertation. Your department might ask that you create a Bibliography instead. A Bibliography is also a list of all sources cited but also includes works that you have read but not cited in your dissertation. While a Bibliography can reveal sources that influenced your thinking, there is a danger that you pad your list with too many uncited sources (because it can be difficult to tell what was cited in-text and what wasn't).

Some departments ask their students to include a Reference list *and* a Bibliography, in which case it is likely that in your Bibliography they want you to show only those books not explicitly cited in-text. In effect, you would then have two lists: one for all the sources cited in-text (titled References), and another list (titled Bibliography) showing sources read but not cited. To remove any ambiguity of what is required of you, check with your department.

Either way, it doesn't change how you will reference. For the purpose of this book, let's assume that you will be creating a Reference list.

Referencing – both in-text and in a list at the end of your dissertation – is important for a number of reasons: it is evidence that you have read widely; it shows others where your ideas come from; it lends support to your ideas; it is a way for you to credit the contribution of others; and it tells those reading your work where to find the sources you cite. In short, it is a record of your reading. Referencing also keeps you at arm's length from plagiarism.

> **! A common mistake**
>
> It is tempting to leave your Reference list to the last minute. That is a mistake. The threat of a looming submission date can result in a rushed, sloppily composed list. Worse, it can lead to the omission of some entries because, with the passage of time, you can't locate the source details for some in-text references. When you cite a source (book, journal, website article, etc.), get into the habit of *simultaneously* updating your Reference list with full source details (author's name, date of publication, page numbers, etc.).

Although referencing is normally associated with written material – books, articles, reports, etc. – it also encompasses other sources of information, such as videos, photographs, works of art, exhibitions, software programs, theatrical performances, and so on. When this book refers to 'authors', it therefore takes a wide view of what constitutes an author: it means whoever wrote or created the work you cite in the body of your dissertation, whether that is a book, an article, a painting, a photograph, or whatever.

There are many established referencing styles. Table 4.1 lists the main referencing styles used in academia. The Harvard style is one of the more commonly

Table 4.1 Referencing styles

Referencing styles	Usage
APA (American Psychological Association)	Social Sciences (Economics, Political Science, Geography, Sociology, etc.)
Chicago	English, History and Fine Arts
Harvard	A generic style used across most discipline areas
IEEE (Institute of Electrical and Electronics Engineers)	Computer Science and Electronics
MHRA (Modern Humanities Research Association) **MLA (Modern Language Association)**	Humanities (Languages, Literature, History, Philosophy, Religion, the Arts, etc.)
OSCOLA	Law
Vancouver	Medicine and Science

used styles, particularly in the UK, primarily because it is clear and concise and easy to follow. Accordingly, it is the one that will be used for demonstration purposes throughout this book. The Harvard style is often referred to as the author-date style because author name(s) and year of publication are the two main elements used to cite authors in the body of your work, though you need to remember that you are also required to record the details of your sources (author's name, date of publication, title of publication, etc.) in a Reference list at the back of your dissertation.

Just as there are different referencing styles, there are slightly different ways of referencing the one style! So, if your institution requires you to use Harvard, do not assume that the Harvard style in a book that you have purchased is exactly the one that your institution is using! Universities can have their own *house style* for a particular referencing system. With that in mind, let's delve into the art of referencing.

In-text referencing

Let's start with referencing in the body of your dissertation, i.e. in-text referencing. There are two main ways that you can cite a source in-text: you can either express their views in your own words – this is called paraphrasing – or you can just quote the source directly. Paraphrase means 'to tell in other words'. If you are reading a newspaper and someone asks you to tell them what is in the news, and you tell them in your own words, then you are said to be paraphrasing. So, when you paraphrase a source in your dissertation, you are expressing

their views in your own words. Here is an example of paraphrasing, using Harvard referencing:

> Atkins (2020) reminds us that pacifists oppose all forms of warfare.

Note that the author has been identified in two ways: first, by name; and, second, by giving the year of the source publication (that is why the Harvard style is referred to as the author-date system). The above is an example of *direct referencing*, i.e. when you *explicitly* refer to an author in a sentence: Atkins (2020) reminds us . . ./Dalton (2019) states that . . ./Henson (2021) asserts . . ., etc.

Sticking with Harvard, if an author expresses the same view in more than one publication and you want to record this fact explicitly, then you do so as follows, separating the different years with a semi-colon:

> Eastwood (2018; 2020) is in favour of capital punishment.

If an author has more than one publication in the same year, then refer to the first one as 'a' and the second one as 'b', and so on, as in:

> Thomson (2020a; 2020b) holds consistently to the view that referencing is a dying art.

If an author has more than one publication in one year and a publication in another year, then continue to separate each publication with a semi-colon, listing them chronologically i.e. earliest first:

> Smith (2016a; 2016b; 2019) complains about political apathy in modern Britain.

Indirect referencing occurs when the author cited is also placed within parentheses. For example:

> Twitter is fast replacing the art of face-to-face discourse (Henderson, 2020).

Note the use of a comma to separate the author's surname from year of publication, e.g. (*Henderson, 2020*). Bear in mind that your institution might have a house style that ignores the comma separating the author and year, in which case you would follow your institution's version, e.g.:

> Twitter is fast replacing the art of face-to-face discourse (Henderson 2020).

Whether you wish to cite a single source directly – by explicitly referring to an author by name – or wish to cite an author indirectly within parentheses, is a matter of personal choice. Here is a source cited directly, then indirectly:

> Atkins (2020) reminds us that pacifists oppose all forms of warfare.
> Pacifists oppose all forms of warfare (Atkins, 2020).

Or, if dropping the comma separating author and year:

> Pacifists oppose all forms of warfare (Atkins 2020).

Indirect referencing, where the author's name is placed in parentheses, is particularly useful if you want to refer to two or more authors who hold the same view. Once again, when two or more authors are grouped together, their works are separated chronologically using semi-colons. Example:

> Ryanair changed the face of air travel (Boulder, 2014; Appleston, 2015; Ripley, 2017).

Or, if dropping the comma between author and year:

> Ryanair changed the face of air travel (Boulder 2014; Appleston 2015; Ripley 2017).

There will be times when you are reading a source (book, journal article, etc.) and the author of the book/journal/article that you are reading cites another source, a source that you yourself want to cite. For instance, suppose that you have in front of you a book written in 2020 by someone called Walker. Suppose further that Walker refers to a journal article written in 1978 by someone called MacFarlane and that you also wish to refer to MacFarlane. You do so as follows:

> Example (using direct referencing)
>
> – MacFarlane (1978, cited in Walker, 2020) holds the view that . . .
>
> Example (using indirect referencing)
>
> – One view gaining prominence . . . (MacFarlane, 1978 cited in Walker, 2020) . . .

As well as paraphrasing a source – directly or indirectly – you can also *quote a source*. If the quotation is not too long, then you can embed it in a sentence, as follows:

> Stewart (2021, p. 10) warns that universities 'must provide formal professional development to support academic staff'.

The page number where the quotation is to be found is indicated after the year of publication, e.g. Stewart (*2021, p. 10*). You can use single or double quotation marks – the choice is yours. Once again, just as a version of Harvard might drop the comma between author and year in indirect referencing – e.g. (Atkins 2020) – you might find that the comma between the year and page number in indirect referencing is replaced by a colon, changing:

> Stewart (2021, p. 10) warns that universities 'must provide formal professional development to support academic staff'.

to:

> Stewart (2021: p. 10) warns that universities 'must provide formal professional development to support academic staff'.

If the quotation is long, and by that one means it is three or more lines in length, then you ought to place it in a paragraph in its own right and indent it to show that it is a quotation and not just another paragraph. Here is an example of in-text referencing where the quotation requires a separate, indented paragraph:

> This Global e-Authority (2020, p. 24), in a report on e-Commerce Opportunities, reflects on the impact of the Coronavirus lockdown on the growth of e-Business:
>
> > In contrast to the difficult financial restrictions placed on those operating a traditional business model, those whose businesses are designed for e-Commerce have taken up the slack and flourished during the Coronavirus. From local take-away deliveries using mobile apps to purchases on Amazon, to large orders for medical supplies, there has been a boom in online sales. The question remains: is this growth temporary or has a fundamental and irrevocable switch taken place on the part of the traditional customer base towards e-Commerce?

You could, if you prefer, cite the source at the end of the quotation as follows. Also, it is not necessary to use quotation marks or *italicise* the text, or even reduce the text size (all of which are optional):

> *'In contrast to the difficult financial restrictions placed on those operating a traditional business model, those whose businesses are designed for e-Commerce have taken up the slack and flourished during the Coronavirus. From local take-away deliveries using mobile apps to purchases on Amazon, to large orders for medical supplies, there has been a boom in online sales. The question remains: is this growth temporary or has a fundamental and irrevocable switch taken place on the part of the traditional customer base towards e-Commerce?'* (Global e-Authority, 2020, p. 24)

If your institution opts for an interpretation of Harvard that drops the comma between author and year, and also replaces the comma between year and page number with a colon, then the citation at the end of the above quote would change from:

> (Global e-Authority, 2020, p. 24)

to:

> (Global e-Authority 2020: p. 24)

Regardless, with a long quotation, you place it as a paragraph in its own right, indent it, surround it with quotation marks (optional), *italicise* it (optional),

and reduce the font size (optional). This makes it easier for your reader to recognise these paragraphs as large quotations and not to confuse them with 'normal' paragraphs. It also makes the text stand out – one assumes that if you are inserting a large quotation, then you do so because you consider the quotation to be of some importance.

> **! A common mistake**
>
> Avoid over-quoting, particularly the use of large quotations. It is not necessary to quote every source that you cite. If you do so, you are in danger of boring the reader and, ironically, lessening the impact of your quotations. If you want your quotations to stand out, then be selective in their use. Furthermore, having too many quotations will eat into your word count and reduce the opportunity for your own 'voice' to come through.

Sometimes when citing sources, you can include page numbers in the body of your document *and* in your list of references at the back of your dissertation. For example, suppose that in your Literature Review (or equivalent) you introduce a quotation and decide to follow common practice by citing the page number beside the author's name, as in:

> Peeke (1984, p. 24) asserts that 'to be a successful researcher can demand a lessening commitment to the task of teaching'.

Or, if replacing the comma with a colon:

> Peeke (1984: p. 24) asserts that 'to be a successful researcher can demand a lessening commitment to the task of teaching'.

If the source for this quotation is a journal, then when you are compiling your list of sources at the back of your dissertation, you need to record where the whole article (not just the quotation) appears in the journal:

> Peeke, G. (1984) 'Teacher as researcher', *Educational Research*, 26(1), pp. 24–26.

Similarly, if citing a printed newspaper article, then the page number(s) of the article should appear in the Reference list entry. Incidentally, a single 'p.' is used to refer to a specific page (e.g. p. 24), whereas 'pp.' indicates a range of pages (e.g. pp. 24–26). So, pp. 24–26 means the range of pages from page 24 to page 26 inclusive. Interpret 'pp'. to mean 'plural pages', from an old English habit of doubling a letter to indicate the plural of something, itself a derivation of a Latin custom.

How do other referencing styles deal with in-text referencing? Table 4.2 compares other referencing styles against the author-date system used in

Harvard. As with Harvard, these approaches are not written in stone, so for the precise details of how to reference in the style to be used in your dissertation, including house rules, you should seek out your department's guidelines. Nonetheless, even the cursory overview presented by Table 4.2 reveals that, when it comes to in-text referencing, there is no one style fits all. If only there were – referencing would be so much simpler!

Table 4.2 Referencing in-text: comparing styles

Referencing styles	In-text
Harvard	Author-date, e.g. Burke (2020) All sources cited also appear in an alphabetical Reference list/ Bibliography
APA	Same as Harvard when referencing in-text, e.g. Burke (2020)
Chicago	Two options exist: 1. Follow author-date system used in Harvard, e.g. Burke (2020); or 2. Use a numbering system with footnotes, e.g. Burke[1] holds the view . . . All sources cited also appear in the alphabetical Reference list/ Bibliography
IEEE	Numbering system used, as in Chicago, but not superscript, e.g. Burke [1] holds the view . . . All sources cited appear in the numbered Reference list/ Bibliography in order cited in dissertation
MHRA	Numbering system used, as in Chicago, e.g. Burke[1] holds the view . . . Numbered footnotes used containing full source details All sources cited also appear in the alphabetical Reference list/ Bibliography
MLA	Full name and page number (even when source is not quoted), e.g. Thomas Burke (32) holds the view . . . If name not available, then title of source used, e.g. There is a technique to writing an essay (*Essays Made Easy* 12) All sources cited also appear in the alphabetical Reference list/ Bibliography by author, but under the heading Works Cited
OSCOLA	Case names numbered using superscript, e.g. In *Ryan v Turner*[16] . . . All sources cited appear in numbered footnotes No Reference list/Bibliography used
Vancouver	Numbering system used. Choice of numbers in brackets (round or square) or as a superscript, e.g. Burke (2) believes . . . or Burke [2] believes . . . or Burke[2] believes . . . All sources cited also appear in a numbered Reference list in order cited in the dissertation

What you should take away from this section is that in-text referencing is quite easy to do but that you need to follow the style and house rules, where any exist, dictated by your institution.

Let's explore in more detail how to create a Reference list, once again staying with Harvard to explain the concept of referencing templates (once you grasp how to use one referencing style's templates, it's easy to use templates for other referencing styles).

Creating a reference list

When you cite sources in-text, you are only required, at most, to identify the author(s), year of publication and, if quoting a source, the page number – particularly when using Harvard. Therefore, it may not be clear at that stage what type of source you are referring to (e.g. book, journal paper, newspaper article, etc.). If using Harvard (or APA or IEEE or MLA), it is in a Reference list at the end of your dissertation where you clarify the details of your source, unless you are using Chicago, MHRA, OSCOLA, or Vancouver referencing, in which case it is in footnotes where you will first record source details.

Here's what a Reference list, in this case using Harvard, starts to look like:

References

Alstyne, V., Brynjolfsson, E. and Madnick, S. (1995) 'Why not one big database? Principles of data ownership', *Decision Support Systems*, 15, pp. 267–284.

Anderson, L. W. and Krathwohl, D. R. (2001) *A taxonomy for learning, teaching and assessment: a revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Azouzi, R., Beauregard, R. and D'Amours, S. (2009) 'Exploratory case studies on manufacturing agility in the furniture industry', *Management Research News*, 32(5), pp. 424–39.

Barrett, E. and Bolt, B. (2010) *Practice as research: approaches to creative arts enquiry*. London: Routledge.

Bates, A. (2000) *Managing technological change: strategies for colleges and university leaders*. San Francisco, CA: Jossey-Bass.

Bell, J. (2014) *Doing your research project: a guide for first-time researchers*. 6th edn. Maidenhead: Open University Press.

As you now know, there are different referencing styles – Harvard, APA, Chicago, IEEE, MHRA, etc. – and even slightly different ways to reference within the one style. This was shown to be true for in-text referencing and it is also true when creating entries for a Reference list (or Bibliography). To illustrate this point, imagine that you have a printed book in front of you and its source details are as follows:

Author: Pullman, R.
Title: Criminology
Year published: 2020
Publisher: Longman
Place of publication: London

To reference in-text using Harvard is pretty standard, with minor variations, from university to university. An example of in-text referencing (or in-text citation, if you prefer) is:

> Pullman (2020) highlights the legal words and themes required to succeed in the world of criminology.

However, recording the source information for Pullman's book in a Reference list can also differ slightly depending on where you seek advice. Table 4.3 shows you how Pullman's book would be recorded at the end of your dissertation if you were using Harvard at either the Open University or Anglia Ruskin University or followed the guidance in the book *Cite Them Right* by Pears and Shields (2019).

Table 4.3 Referencing a book using Harvard: different advice, different formats

Institution	Book
Open University (http://www.open.ac.uk/libraryservices/documents/Harvard_citation_hlp.pdf)	Pullman, R. (2020) *Criminology*, London, Longman.
Anglia Ruskin University (https://library.aru.ac.uk/referencing/files/QuickHarvardGuide2019.pdf)	Pullman, R., 2020. *Criminology.* London: Longman.
Pears, R. and Shields, G. (2019) *Cite Them Right: The Essential Referencing Guide*. 11th edn. London: Red Globe Press Macmillan.	Pullman, R. (2020) *Criminology*. London: Longman.

None of the referencing formats in Table 4.3 are wrong, even though no two are completely identical. Can you spot the differences? Two have the author's initial ending with a period, one doesn't; two have the year of publication in parentheses, one doesn't; one has a period before the book title, two don't; all have the book title *italicised*; two have a period after the book title, one has a comma; two separate the place of publication and the publisher with a colon, one has a comma.

This lack of a common approach to creating a Reference list using Harvard is reflected in wider academia. Nonetheless, the advice in Pears and Shields' book *Cite Them Right* is understandably proving to be very popular in universities, evidenced by the fact that many departments recommend it to their students. The Harvard formatting advice given in this book adheres to that found in *Cite Them Right*. Where any differences occur, an explanation is provided. *Cite Them Right* also gives detailed referencing guidance on other citation styles: APA, Chicago, IEEE, MHRA, MLA, OSCOLA, and Vancouver.

To give you an idea of what a referenced entry looks like, let's examine the construction of a book entry in more detail. That should help you understand how to apply referencing templates to other types of entries.

! A common mistake

Silly marks are lost because students often fail to follow referencing templates to the letter. A failure to do so looks sloppy too. Careful attention to detail gives your work a professional gloss and, importantly, is rewarded with easy marks.

First of all, you have to understand the concept of a referencing template. It is a formatting style that you can apply to your own sources. In Reference list entries, there are different formats for different types of sources, for art works, government publications, newspaper articles, films, photographs, and many more. Here's a template for a book entry:

Book

Author's surname, initials (year) *Title of book.* Edition if not first. Place of publication: Publisher.

This template is telling you: (1) the information you need to enter and (2) the way you need to enter it. Breaking this down, this book template is telling you to:

Enter the author's surname:

e.g. **Dreyfuss**

Followed by a comma:

e.g. **Dreyfuss,**

Followed by the author's initials:

e.g, **Dreyfuss, H. L.**

Followed by the year of publication in brackets:

e.g. **Dreyfuss, H. L. (2001)**

Followed by the book title italicised:

e.g. **Dreyfuss, H. L. (2001) *On the Internet***

Followed by a full stop:

e.g. **Dreyfuss, H. L. (2001) *On the Internet*.**

Followed by the edition number (if not first) and full stop. In this example, we'll assume this is the first edition.

To continue our example:

Followed by the place of publication:

e.g. **Dreyfuss, H. L. (2001) *On the internet*. London**

Followed by a colon:

e.g. **Dreyfuss, H. L. (2001) *On the internet*. London:**

Followed by the name of the publisher:

e.g. **Dreyfuss, H. L. (2001) *On the internet*. London: Routledge**

Ending with a full stop:

e.g. **Dreyfuss, H. L. (2001) *On the internet*. London: Routledge.**

Here are other examples of book entries using the same template:

Boland, A., Cherry, M. G. and Dickson, R. (2013) *Doing a systematic review*. London: Sage.

Hoaglin, D. C. *et al.* (1982) *Data for decisions: information strategies for policymakers*. Cambridge, MA: Abt Books.

Neville, C. (2016) *The complete guide to referencing and avoiding plagiarism*. 3rd edn. London: Open University Press.

Pears, R. and Shields, G. (2019) *Cite them right: the essential referencing guide*. 11th edn. London: Red Globe Press.

The concise Oxford dictionary (1988) 9th edn. London: BCA.

Note that in the example above starting Hoaglin, D. C., not all the authors are listed. Instead, *et al*. is used – *et al.* is Latin for 'and others' to indicate that there are other authors. It is commonplace for academics to use *et al.* in-text, e.g.:

Strategic decision-making requires the right data at the right time (Hoaglin *et al.*, 1982).

Et al. saves you writing down all the authors. Some academics will use *et al.* when there are three or more authors, others when there are four or more authors (an approach recommended by Pears and Shields in *Cite Them Right*). You can also use *et al.* for Reference list entries, but if you are one of the 'and others' then you might not be best pleased: contributing authors understandably like to see their efforts credited. There is nothing wrong with replacing the Hoaglin example with an expanded reference entry to include all contributing authors, as follows:

Hoaglin, D. C., Light, R. J., McPeak, B., Mosteller, F. and Stotos, M. A. (1982) *Data for decisions: information strategies for policymakers*. Cambridge, MA: Abt Books.

In the body of your dissertation you would be expected to cite this as Hoaglin *et al.* (1982) but it makes sense to give credit to all authors when you create your reference list. Then again, in the unlikely event that there are

20 contributing authors, no one would hold it against you if you resorted to *et al.* Appendix E contains a list of useful Latin terms, some of which you might want to use in your dissertation.

Another point worth mentioning. The example starting *The Concise Oxford Dictionary* shows you how to write a reference entry where there is no author. In such a scenario, the title of the book (*italicised*) appears in place of an author.

Appendix F contains a collection of summary formatting templates (with completed examples) for referencing art works to websites, using Harvard. As illustrated in Table 4.3, although there are a few variations of Harvard referencing going the rounds, the templates in this book are based on the advice given by Pears and Shields (2019) in their *Cite Them Right*.

Here is a task that is more common than you think: How do you record a source that is cited in another source that you are reading? Which source do you record – the source that you are reading or the source to which it refers? If you remember, this was a scenario in an earlier in-text example, where Walker (2020) refers to an earlier source, an article by MacFarlane (1978). To cite MacFarlane in-text, two options were given:

Example (using direct referencing)

– MacFarlane (1978, cited in Walker, 2020) holds the view that . . .

Example (using indirect referencing)

– One view gaining prominence . . . (MacFarlane, 1978, cited in Walker, 2020).

Let's assume that MacFarlane, whose article appears in a journal, is discussed in a book by Walker. Here's how this full reference could appear in a Reference list. You reference the journal article first – because that is the work that interests you – followed by the book that refers to the journal article:

MacFarlane, K. (1978) 'Alternative approach to cognitive learning', *Organisational Learning*, 10(2), pp. 23–45, cited in Walker, A. (2020) *Learning again.* Buckingham: Open University Press, p. 634.

Suppose that you have read a book called *Classic and Cavalier: Essays on Jonson and the Sons of Ben*. This book consists of articles written by different authors and you want to record the reference details for an article that was written by Martin Elsky, which appears from page 31 to page 44 in the book. To record the reference, you give the article first – because that is the source that you are interested in – then the book details, as follows (this time just use 'in' rather than 'cited in' because the article itself appears *in* a book):

Elsky, M. (1982) 'Words, things, and names: Jonson's poetry and philosophical grammar', in Summers, C. J. and Pebworth, T. L. (eds) *Classic and cavalier: essays on Jonson and the sons of Ben*. Pittsburgh, PA: University of Pittsburgh Press, pp. 31–44.

Revisiting the matter of self-plagiarism, how do you record your own work in a Reference list? Given that you are a student, it is likely that your previous work appeared in an essay or a report or perhaps an undergraduate dissertation. Here's a template to list each in a Reference list, followed by example entries for an essay, a report, and an undergraduate dissertation, respectively:

Your name (year) 'Title', *Module code: module name*. Institution. Unpublished [type of assignment].

Barker, J. (2020a) 'UK Government reaction to the Coronavirus', *S451: Sociology*. Inverclyde University. Unpublished essay.
Barker, J. (2020b) 'Social Distancing in the UK', *S451: Sociology*. Inverclyde University. Unpublished report.
Barker, J. (2021) 'A Study of Student Behaviour in Flat Living', *S300: Sociology*. Inverclyde University. Unpublished dissertation.

If you were adhering to the advice given by Pears and Shields (2019), then you don't need to identify the type of assignment (essay, report, dissertation, etc.), as long as you give the code or name of the module and the degree title. Applying this more generic template to the above examples:

Your name (year) 'Title', Assignment for *module*, *degree*, Institution. Unpublished.

Barker, J. (2020a) 'UK Government reaction to the Coronavirus', Assignment for *S451*, *BSc. Sociology*, Inverclyde University. Unpublished.
Barker, J. (2020b) 'Social Distancing in the UK', Assignment for *S451*, *BSc. Sociology*, Inverclyde University. Unpublished.
Barker, J. (2021) 'A Study of Student Behaviour in Flat Living', Assignment for *S300*, *BSc. Sociology*, Inverclyde University. Unpublished.

But how do you cite yourself in-text? It would be good if you could write: 'In an essay I wrote last year (2019), I argued that . . .'. However, in UK institutions, referring to yourself in the first person in a formal assignment is normally frowned upon. If you reside outwith the UK, then your institution may think differently, which is no bad thing. Here are some examples of how to cite your own student work in-text:

Social distancing was a primary response of the UK Government to the Coronavirus (Barker, 2020a, 2020b).

Student behaviour in flat living, although having the benefit of shared responsibilities, nevertheless can lead to groupthink (Barker, 2021).

To be absolutely clear that you are referring to your own work, you could place an asterisk next to the citation with a footnote at the bottom of the page indicating that the source cited is yourself:

> Social distancing was a primary response of the UK Government to the Coronavirus (Barker*, 2020a, 2020b).
>
> Student behaviour in flat living, although having the benefit of shared responsibilities, nevertheless can lead to groupthink (Barker*, 2021).
>
> * The source cited is the author of this dissertation.

Of course, although it is useful to understand how the entries for the different sources in a Reference list (or Bibliography) are constructed, there is the option of using software to format your entries. *Cite This For Me* (previously called RefME) is one option. It's online and it's free. You select your citation style (Harvard, APA, MLA, etc.) and then enter some basic information about the source you want formatted. *Cite This For Me* will search the internet for your source, and give you a list of options (because there may be different editions from which to choose). You simply click the one you want. You also have the option of entering details manually.

Universities themselves will make referencing software available to their students. Examples of popular referencing tools include Refworks, EndNote, Mendeley, Paperpile, Zotero, and BibTex (for physical sciences and engineering students). All of these tools are useful but you might still have to edit the end results to fit in with the precise formatting requirements of your chosen citation style and your department's requirements – and you can only do that if you know how to follow a reference template.

All the above formatting examples relate to common sources of information regularly sought out by students. However, those students who want to cite and reference 'things', such as art works, exhibitions, photographs, computer programs, software apps, etc. also need advice. In Chapter 6, 'The Literature Review', advice is given on how to cite these *things* in the body of a dissertation and how to include their full source details in a reference list.

The key to referencing in your dissertation is:

1 Use the style of referencing recommended by your department (e.g. Harvard or APA or whatever).
2 Adhere to your department's house style.
3 Be meticulously consistent!

Even when you are using software recommended by your institution, make sure that the end result conforms with your department's referencing requirements.

Citing sources in-text and referencing full source details in a footnote or in a Reference list or Bibliography is a laborious process, even when using software tools, but it is a necessary part of being viewed as a competent researcher. The upside is that there are easy marks up for grabs.

Checklist

Plagiarism and referencing checklist

1 Got my institution's regulations on plagiarism ✔
2 Understand what counts as plagiarism ✔
3 Know what referencing style my department recommends ✔
4 Got guidance material on that referencing style ✔
5 Understand how to cite sources in-text ✔
6 Know the difference between a Reference list and a Bibliography ✔
7 Know if my department wants Reference list, Bibliography, or both ✔
8 Know how to follow reference templates for different sources ✔
9 Know what referencing software is recommended by my department ✔
10 Know how to use referencing software ✔

Reference

Biggam, J. (2020) *Succeeding with your university essay: a step-by-step handbook*. London: McGraw-Hill.

Further reading

Pears, R. and Shields, G. (2019) *Cite them right: the essential referencing guide*. 11th edn. London: Red Globe Press.
Williams, K. and Davis, M. (2017) *Referencing and understanding plagiarism*. 2nd edn. London: Palgrave Macmillan.

Summary of key points

- *Plagiarism is to be avoided*. Essentially, it occurs where someone's words and/or ideas are used without due acknowledgement.
- *Self-plagiarism* is where you fail to acknowledge your own work/ideas, e.g. that appeared in previously submitted assignment.
- To avoid plagiarism, *acknowledge your sources.*
- *Reference your sources* in two places: within the body of your dissertation where you *cite your sources* (e.g. using author-date system) and in either a Reference list or a Bibliography, or both, at the end of your dissertation where you provide full *source details*.
- A *Reference list* is a list of all the sources that you have cited explicitly in the body of your dissertation. A *Bibliography* is also a list of references cited but also includes works that you have read but not cited in your dissertation (if your department requests both, then they may only ask that the Bibliography contains sources not cited).
- There are different types of *referencing systems* used in academia. The main ones are: Harvard, APA, Chicago, IEEE, MHRA, MLA, OSCOLA, and Vancouver, each focusing on a particular discipline, although Harvard is a relatively generic referencing system.
- Each reference system will have *templates* to cover how to reference a variety of sources, from books, journals articles, websites, and many more.
- Bear in mind that even within referencing systems, *variations* occur, e.g. there are slightly different ways of applying Harvard depending on where you look for advice. This means that it is important to check the *referencing system your department recommends* and their *house style* for that referencing system.
- There is always *software* to ease the manual burden of referencing sources. Even then, you may have to alter the final output to fit in with your department's house style.
- The use of *Latin terms* can add an intellectual flavour to your dissertation, provided they are applied correctly, some of which directly relate to referencing. In the context of a dissertation, useful Latin terms include: *et al.*, ibid., op. cit., viz., *inter alia*, [sic], i.e., e.g., etc., v.i. and v.s. (see Appendix E).
- Appendix F contains *referencing templates for Harvard.* Examples are included.

Chapter **5**



The dissertation Introduction

• The general structure of the Introduction • Background • Research focus • Overall research aim and individual research objectives • Outline research methods and timescales • Value of your research • A further suggestion • Checklist • Summary of key points

This chapter shows you how to write the introductory chapter to your dissertation.

The general structure of the Introduction

The introductory chapter to your dissertation is typically labelled 'Chapter 1 Introduction'. Your Introduction ought to do a number of things:

- Provide preliminary background information to place your study in context.
- Clarify your focus of study.
- Specify your overall research aim and individual objectives.
- Outline your research methods and timescale of activities.
- Point out the value of your research.

Accordingly, you could structure your introductory chapter as follows:

1 Introduction
- 1.1 Background
- 1.2 Research Focus
- 1.3 Overall Research Aim and Individual Research Objectives
- 1.4 Outline Research Methods and Timescales
- 1.5 Value of This Research

Notice the logical refinement taking place from 1.1 down to 1.5. You gently introduce the reader to some background information, from which emerges your research focus, and from that you pinpoint the aim of your research and specific research objectives you deem necessary to achieve that overall aim, after which you outline the research methods you will use to complete those research objectives, concluding with a comment on the value of your research.

If you find it more convenient, it is perfectly acceptable to merge, and rename, subsections as you see fit. It is also your choice whether or not to number the subheadings or, indeed, to have subheadings at all – as long as the expected content is covered. This chapter will discuss the content of the dissertation Introduction in some detail.

Much of what is written in Chapter 2 'Submitting a research proposal' applies to this chapter. That is because students often use their accepted research proposal – after feedback from their supervisor – as the basis for their introductory chapter, and the reason they do that is because both activities perform a similar job: to introduce the reader to your research area. Nevertheless, this chapter will carefully take you through each component of a dissertation Introduction, showing examples of good (and bad) practice to illustrate salient points. At the end of this chapter you should be in an excellent position to write the Introduction to your own dissertation.

Background

It is generally bad practice to jump in and immediately identify the focus of your study. Why? Because your supervisor (and external marker) will want to know what led you to study your specific research area. This usually means identifying a gap in existing research or revealing a problem that needs addressing. Perhaps you are looking at a topic from a different angle or maybe recent reports indicate that there is a call for research in your particular area of interest. It is not enough to write that you have decided upon your field of study because you find it interesting: you need to go further and explain the rationale in terms of either a *need* or a *benefit* or both.

> **! A common mistake**
>
> A common mistake by students is to pay scant attention to background reading, failing to appreciate that it serves a useful purpose, which is to place your proposed research in context.

You need to show some preliminary reading in your Introduction that has influenced your proposed research. Get into the habit of using your university's library system to access internal and external subject databases. Once you get

a feel for your subject, and you know what you specifically want to research and why, you can then start to write the *Background* part of your Introduction.

You do this first of all by gently introducing the reader to your general research area. That is to say, if your research focus was on, for example, the need to study the type of people who spread viruses on the Web, you do not start your Introduction by stating: 'There is a need to study the type of people who spread viruses on the Internet. This dissertation will do that by . . .' Instead, it is better to begin by smoothly introducing the reader to the idea of e-security threats:

> E-security is of growing concern for those who use the Internet (DTI, 2020). These threats can range from Denial of Service (DOS) attacks, Web vandalism, Spam, viruses to fraudulent use of emails . . .

The first sentence contains a reference to literature (in this case, the Department of Trade and Industry, i.e. DTI). Let the reader know, as early as possible, that you are well-read in the area, and there is no better time to do that than in the first paragraph of your dissertation.

Let us now return to the e-Learning example identified in Chapter 2 'Submitting a research proposal'. The overall aim of that dissertation topic was to 'advance an understanding of the impact of e-Learning in the university environment in relation to academic staff training preparation'. A sample Introduction is included in Appendix G. This sample Introduction has taken the Research Proposal in Appendix B and altered it, adding parts here and there, to fit into the subheadings above. The length of the sample Introduction could easily be condensed if word-length were an issue. For now, we will concentrate on the sample Background. Read the Background subsection in Appendix G now.

Note the structure of this Background. The structure appears, not overtly through subheadings, but through the logical flow of interconnecting ideas. The reader is eased into the chosen subject area – academic staff and e-Learning in the university environment – through a general discussion of traditional teaching and learning, followed by reference to the drive for e-Learning in the university environment, leading to a changing role for academic staff, and ending with the need for staff to be prepared to cope with this change (see Figure 5.1).

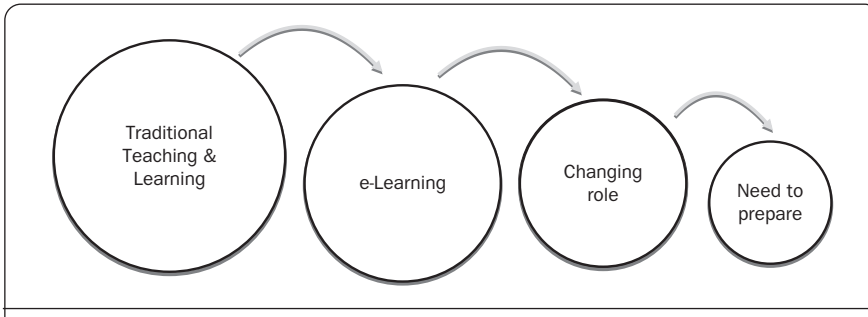


Figure 5.1 Background structure (from sample Introduction)

By quickly setting the scene and placing the research in context, the reader will not be surprised when the dissertation's research focus is identified in the next subsection.

> **! A common mistake**
>
> If students do not write *too little* on their background subsection then, paradoxically, they can be found going to the other extreme and spending *too much* time on background information. Two or three meaningful paragraphs can do the job; a page and a bit, at most. The length of your background will, of course, depend on the number of words that you have to play with in your dissertation. You want to arrive at your research focus quite quickly, but not before you provide some basic information that places your research in context and allows the reader to appreciate your (soon to be identified) research focus. You need to remember that this is a basic Introduction you are talking about here, so you do not want to spend too much time on background information, otherwise the reader will start to wonder what your research is supposed to be about. Aim for simple clarity. The time for in-depth discussion will come later.

The sample Background in Appendix G has some good points that need emphasising, although in truth it could be shortened. In the very first paragraph there is a reference to other literature:

> Aristotle's lectures, preserved in the writings of Plato, are examples of such an approach, where the student is educated on particular topics through the mechanism of illuminating conversations – *dialogues* – between tutor and student (Taylor, 1955).

Right away, you are letting the reader know that you understand good academic practice: you are supporting your ideas with reference to other authors and you are showing that you know how to cite sources, in this case using the Harvard author-date referencing system – see Chapter 4 'Plagiarism and referencing' for details on how to reference. Second, in the sample Background there is a mix of in-text references. Examples of these different ways to cite sources are extracted from the sample Background and illustrated below:

1 *Indirect referencing*:

   Aristotle's lectures, preserved in the writings of Plato . . . between tutor and student (Taylor, 1955).

2 *Multiple indirect referencing*:

   Online learning, networked learning, distributed learning, flexible learning, virtual learning, are some of the terms used to describe learning that uses technology as a vehicle for educational delivery (Salmon,

1998; Britain and Liber, 1999; Jung, 2000; Collis and Moonen, 2001; Rosenberg, 2001).

3 *Direct referencing:*

Haywood *et al.* (2004) believe that most students . . .

4 *Direct referencing with quotation embedded in sentence*:

Universities have also moved rapidly to acquire dedicated software platforms . . . with Moe and Blodget (2000, p. 104) emphasising that 'the next big killer application for the Internet is going to be education'.

5 *Direct referencing with separate indented quotation*:

As early as 1997, the Dearing Report foresaw the benefits of using ICT in higher education:

> . . . we believe that the innovative application of . . . C&IT holds out much promise for improving the quality, flexibility and effectiveness of higher education. The potential benefits will extend to, and affect the practice of, learning and teaching and research (Dearing, 1997, 13.1).

The sources above might appear dated: 1998, 2000, 2001, etc. However, when this work was submitted, the in-text references were recent and relevant.

It is in the next subsection in your Introduction – 'Research focus' – where you reveal the actual focus of your research, which includes the rationale for your research together with the specifics of what you intend doing. At this stage, you have made your job easier by framing your research in a wider context. Your reader should now have no difficulty understanding your research topic.

Research focus

Two things your supervisor will want to know are:

1 The focus of your research.
2 The rationale for your study.

It is important that you clarify the areas and that you also explain why you want to research these areas (there will be more than one area you will want to research because you will have more than one research objective).

Reference will be made to the subsection 'Research focus' in the sample Introduction (in Appendix G) to make some pertinent points on how to clarify the focus of your research, so read it now. The sample 'Research focus' subsection in Appendix G starts by linking back to the Background subsection ('There is some confusion about the benefits of e-Learning'). Try and imitate this approach because it lets your discussion flow and keeps the reader on track, as well as yourself!

A common mistake

Beginning each subsection as if it were unrelated to the previous subsection is a common problem: this can disrupt the flow of your dissertation and, more importantly, cause you to stray from your main thesis. When supervisors read a new part of a chapter, and it begins with no apparent link to the previous part, then they will begin to ask themselves one or two questions, such as 'What does this have to do with the previous bit?' or 'Is the student going off at a tangent?'

As stated, the sample 'Research focus' subsection starts by linking back to the Background subsection ('There is some confusion about the benefits of e-Learning'). The same paragraph then goes on to provide some examples of this confusion about the benefits of e-Learning by citing literature sources, thereby convincing the supervisor and marker – they may well be the same person – that the writer is well-read and not someone who makes statements without providing supporting evidence.

A common mistake

When students first introduce their chosen field of study, it is not uncommon for them to provide one or two sentences on their dissertation topic and think that they have provided enough justification on why their topic is worthy of study. No! You must convince the reader that you have a 'worthy area of study' by (1) referring to other literature and (2) persuading the reader of the need for your study. While completing (1) and (2), make sure that you tailor your examples and discussion to reflect the individual objectives that are of interest to you.

The second paragraph in the sample 'Research focus' subsection introduces what will be the main focus of study for the student's dissertation, i.e. preparing university staff for e-Learning:

> In particular, e-Learning commentators are also warning that academic staff in universities require to be prepared to cope with e-Learning, to make the shift from *sage on the stage* to *guide on the side*.

Once again, the writer has taken the opportunity to refer to other authors using a variety of in-text citation techniques, including direct referencing, indirect referencing, and the use of a quotation, as follows:

> Haywood *et al.* (2004) . . . (Farrell, 2001) . . . Moe and Blodget (2000, p. 104) . . .

Once you have justified your general area of study – in this case, staff e-Learning preparation – you can then discuss the rationale behind what will become your individual research objectives. It is your general area of study that is eventually moulded into your overall research aim (e.g. 'The overall aim of this research is to advance an understanding of the impact of e-Learning in the university environment in relation to academic staff training preparation'). The main argument behind your individual research objectives, whatever they are, tends to be that by achieving them, you will achieve your overall research aim. To remind you, the sample research objectives that appeared in the sample dissertation proposal (see Appendix B) were:

> Within the context of higher education, the specific objectives of this research are to do the following:
>
> 1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
> 2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
> 3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
> 4 *Formulate* recommendations on staff preparation issues.

However, these objectives need to be revealed gradually, in an evolutionary way. Thus, do not start your 'Research focus' subsection by blatantly stating your overall research aim and associated individual objectives: that is too crude an approach. It is much better to allow your overall aim and specific objectives to emerge as a result of academic discussion, however brief. The second paragraph in the sample Introduction introduced the focus of the overall aim; the remaining paragraphs break down the overall research aim into individual objectives, while also justifying the need for these specific areas of study.

The third and fourth paragraphs in the sample Introduction (beginning 'Critical to this study is an understanding of the type of support that is required' and 'The importance of research in this field of e-Learning becomes even more apparent' respectively) focus on the need to assess staff e-Learning preparation models and frameworks and the need to ascertain staff views on their experiences.

The fifth paragraph (beginning 'If academic staff do not accept the educational benefits of e-Learning . . .') justifies the need to clarify the drivers and barriers to e-Learning.

And the last paragraph neatly summarises, in one sentence, the aforementioned focus of the research:

> To gain a deeper understanding of these issues related to academic staff preparation, two main activities will need to be tackled: a review of relevant literature to ascertain current research findings on e-Learning

> preparation issues, including drivers and potential barriers; and empirical data collection on academic staff experiences of preparing for e-Learning.

The terms 'overall research aim' and 'specific research objectives' are not actually used in the sample 'Research focus' subsection: this is a matter of choice. If you wish, you can use the 'Research focus' subsection to clarify your overall research area, justify it, and identify the specific research areas that you will be studying, and not worry too much about labels. It is in the next subsection of the Introduction chapter – 'Overall research aim and individual research objectives' – where you finally nail down for the reader your specific research focus using the terms 'research aim' and 'individual research objectives'.

Overall research aim and individual research objectives

Chapter 2 of this book, 'Submitting a research proposal', gave guidance on how to write your overall aim and individual research objectives. These tasks are so important to your dissertation that it is worthwhile revisiting this topic, but within the context of your Introduction chapter.

This subsection should be relatively easy for students. It is in the previous subsection of your introductory chapter, i.e. 'Research focus', where you ought to have explained to your supervisor the areas you intend to study and why. This subsection is important because it is where you take your research focus and reduce it to clearly identifiable tasks against which you are asking your marker to judge your work. So think carefully about the tasks that you set yourself!

The subsection headed 'Overall research aim and individual research objectives' of the sample Introduction in Appendix G begins by re-stating the overall aim of the student's research:

> The overall aim of this research is to advance an understanding of the impact of e-Learning in the university environment in relation to academic staff training preparation.

In this part of your Introduction you must state unequivocally, using simple statements, the specific research objectives that you intend meeting in order to achieve your overall research aim, as in the sample chapter:

> Within the context of higher education, the specific objectives of this research are to do the following:
>
> 1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.

2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
4 *Formulate* recommendations on staff preparation issues.

Your supervisor may request that you pose your research in the form of specific research questions. This is easy to do. First of all, write down your overall research aim, then the individual objectives you think you need in order to satisfy this overall aim. Next, convert your overall research aim into a research question. Finally, convert your individual objectives into sub-questions.

This would change the overall research aim in the sample to:

> What is the impact of e-Learning on academic staff training preparation?

Converting the individual research objectives into questions, gives us:

> Within the context of higher education, the specific objectives of this research are to answer the following questions:
>
> 1 What are the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes?
> 2 What models and frameworks are available to support academic staff in coping with e-Learning and how helpful are they?
> 3 What are staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning?
> 4 As a result of these research questions, recommendations on staff preparation issues will be formulated.

Alternatively, you can mix and match how you wish to write your overall research aim and corresponding research objectives. For example, you can state your overall research aim, not as a question, but as a simple research task ('The purpose of this research is to investigate . . .') and then shape your individual research objectives into questions (as above), the answers to which you reckon will cover your main research aim.

Or you could do the reverse: write your overall research aim as a research question to be pursued ('The main question that this research will attempt to answer is . . . ') and then list the individual research tasks you consider need to be completed in order to produce an answer to your substantive research question.

This gives you four options:

- Option 1. Give your overall aim and individual research objectives as statements.
- Option 2. Pose both your aim and individual objectives as questions to be answered.

- Option 3. Pose your aim as a question and your individual research objectives as statements.
- Option 4. State your aim and pose your individual research objectives as questions.

To play safe on which approach to adopt, consult your dissertation supervisor. Different institutions, and different departments in the same institution, can prefer different practices.

Notice that the last objective – objective 4 – was not rewritten as a question, but simply added as an output: *4. As a result of these research questions, recommendations on staff preparation issues will be formulated.* The last objective tends to be summative, either making recommendations based on your research, or pointing out the implications of your findings.

Your whole dissertation depends on the tasks that you set yourself, so how you write your individual research objectives is crucial. They should be:

- appropriate (i.e. clearly related to what you want to study);
- focused (i.e. each objective is distinct and incrementally aids in achieving your overall research aim);
- clear (i.e. avoids ambiguity and includes snappy, meaningful keywords);
- achievable (i.e. is realistic, given the timescale available to complete the dissertation).

Initially, you will be marked on the appropriateness of these objectives and perceived focus (or lack thereof), including how realistic they are. When you finally submit your dissertation, you will also be marked on whether or not you have achieved your research objectives.

If you want to lose marks, then make sure that your objectives are *inappropriate*, *unfocused*, *vague* and *unrealistic*. You can do this by ensuring that you include objectives that have little to do with your stated aim, are too general in nature, include fuzzy keywords (such as 'look at'), and are unrealistic (i.e. are overambitious).

What follows is a fine example of a crisply written research aim and associated research objectives:

> The aim of this dissertation is to gain an understanding of how Cybercrime is affecting the online business community, with a view to offering guidance on the way forward. The following objectives have been identified as a way of achieving this aim:
>
> 1 *Clarify* what is meant by the term *Cybercrime*.
> 2 *Explore* the vulnerability of business organisations to Cybercrime.
> 3 *Critically assess* the effectiveness of current preventative measures.
> 4 *Implement* a case study of Cybercrime on an online business.
> 5 *Recommend* to the business community, through an online security framework, how to combat Cybercrime.

The above objectives are clear and logical and there is a developmental flow to the student's proposed research. The student could go on to justify the need for each of the objectives and offer some insight into each area:

> The first objective is necessary because the term Cybercrime can be misleading . . . Objectives 2 and 3 will form the core of the Literature Review and will involve the study of areas such as . . . Objective 4, the collection and analysis of empirical data, will allow the researcher the opportunity to study, in depth, one organisation . . . Finally, as a result of the Literature Review findings and an analysis of the case study, recommendations . . .

You do not need to justify your overall aim again, but make an effort to restate briefly why the individual objectives are important, as shown in the sample chapter ('It would be difficult to comprehend how staff ought to meet the challenge of e-Learning without knowing the drivers behind e-Learning . . .').

Some advice

- Start each objective with a keyword ('Identify', 'Assess', 'Evaluate', 'Explore', 'Examine', 'Investigate', 'Determine', 'Review', etc.). This will help you focus. Appendix C contains a list of keywords that you may find useful.
- The first individual objective tends to be a simple one, such as 'Identify' or 'Clarify', to help set the scene in your research study ('identify security issues', 'clarify the causes of smoking', etc.) prior to in-depth research in the main body of your work.
- The other keywords ought to indicate depth of study ('Evaluate critically', 'Explore', etc.) because these objectives will form the main part of your research. In the above example, 'evaluate critically' and 'explore' are used in objectives 2 and 3 respectively, where objective 2 will involve an extensive review of relevant literature, while objective 3 refers to the collection of empirical data.
- Do not have too many objectives: one or two is too few; six tends to be too many. If combining theory with practice, you could have one objective that sets the scene, another that will form the bulk of the literature review (theory), another still that will refer to the empirical study (practice), and a final objective related to making recommendations, or highlighting implications. That makes four objectives. If you feel it necessary to include an additional objective, this tends to occur in objective 2, where you have the opportunity to indicate two major areas of study in the Literature Review (e.g. 'review the e-learning initiatives *and* their effectiveness in the workplace', 'assessing e-security threats *and* countermeasures', etc.).
- There is no definitive rule to the number of objectives allowed, but having too few is just as problematic as having too many, with the former leading to vagueness and the latter resulting in piecemeal work.

When you list your specific research objectives, you are really saying to your supervisor: 'This is what I am going to do in this dissertation, so mark me on these objectives. If I stray from these objectives, or write about other objectives later in my dissertation that were not identified in my introduction, then mark me down.' Therefore, take time to give careful consideration to your individual research objectives so that they are *appropriate*, *focused*, *clear* and *achievable*.

Outline research methods and timescales

You need to throw some light on how you will carry out your research. Example:

> . . . two main research vehicles will be exploited to facilitate this study: an in-depth review of relevant literature and the collection and analysis of empirical data.

If there is an empirical element to your research, there is no need at this stage to explain *in detail* how you will gather and analyse your empirical data: you can simply refer the reader to your later section on research methods for the precise details. Example:

> The Research Methods chapter contains the details of both the research strategy and the data collection techniques to be used to obtain empirical data.

Nevertheless, you should provide *outline information*, such as your general research strategy (e.g. case study), research participants (e.g. university staff) and data collection technique(s) (e.g. interviews), but the precise details of your research choices are left to your Research Methods chapter.

The subsection 'Outline research methods and timescales' of the sample Introduction starts by linking particular research methods with specific research objectives:

> This research will depend on a review of pertinent literature (objectives 1 and 2) and the collection of empirical data through a case study (objective 3).

Next, examples of literature sources are identified:

> The secondary data (i.e. literature review) will largely come from journals (e.g. *International Journal of e-Learning*); conference proceedings (e.g. Online Educa); seminal books (e.g. Laurillard, 2009) and recent surveys. The following library databases will, in particular, be used to support this research: ERIC, British Education Index (ProQuest) and JSTOR.

Followed by outline information on how the empirical study will be implemented:

> The primary data (i.e. empirical data) will be collected through a case study . . . The case unit will consist of an academic department within . . . The means of collecting the primary data will be based on an initial questionnaire to academic staff from which a subset of the target population will be subject to a detailed follow-up interview. In addition, a number of *elite staff* – those responsible for the success of e-Learning and staff training – will be interviewed.

It will also prove helpful to your reader if you include a bar chart or a Gantt chart identifying the main research activities against expected durations. Even a basic table will suffice. The way to create your pictorial representation is to list, not the objectives, but the parts that will form the substance of your dissertation (e.g. Introduction, Literature Review, Research Methods, Discussion, Conclusion and Recommendations) against the time that you expect each activity to take, in terms of either weeks or months. Table 5.1 is a template for a simple table. Appendix G contains an example of a completed table showing a breakdown of research activities and how long each activity is likely to take.

It is not important that your expected timescales prove accurate, merely that you recognise the need for strategic planning, that you have an awareness of the big picture and how each of the tasks connect to complete the big picture, and that you have made a reasonable estimate on how long you expect to complete the main parts of your dissertation. In other words, you are doing what good researchers do – organising your research work.

Of course, you do not pluck your timescales out of thin air: have an intelligent guess at how long you think each task will take you, taking into account time for other modules, illness (e.g. common flu), holidays, unexpected emergencies, other work, days when you might be tired, etc. Do not expect your timescale to run like clockwork – it will not – but doing one gives you a realistic sense of what lies ahead. It is also evidence to your supervisor/marker that you are thinking like a researcher!

Table 5.1 Breakdown of dissertation timescales

Dissertation activity	Duration (in weeks)	Calendar month
Activity 1		
Activity 2		
.		
.		
Activity n		

A common mistake

Another common mistake by students is not to start their dissertation when they are supposed to, but to leave it as late as possible, citing other commitments and always promising that after such-and-such a time, event, etc., they will concentrate exclusively on their dissertation. It is not uncommon for students still to be struggling with their Literature Review (and, on occasion, still rewriting their individual objectives!) when they ought to have completed their chapter on Research Methods. Too often, when students are submitting their final dissertation, they complain that they wish they had more time. Don't make that mistake. Plan ahead, and do your best to stick to your plan.

With regards to the structure of your Introduction, you could, if you find it more convenient, merge subsections, particularly if word count is an issue. For example, the two subsections 'Research focus' and 'Overall research aim and individual research objectives' could easily form one subsection, 'Research focus'. Or, alternatively, merge 'Overall research aim and individual research objectives' and 'Outline research methods and timescales' into one subsection: 'Overall research aim and individual research objectives'.

Value of your research

In the 'Research focus' subsection of your Introduction you ought to have justified why you are doing your research, but it can also be a good idea to have a separate subsection, entitled 'Value of This Research' or 'Importance of This Research' or 'Beneficiaries of This Research' or 'Research Worth' or 'Added Value', where you make it crystal clear to the reader – i.e. those who will be judging the merit, or otherwise, of your efforts – how your work will add value to your chosen field of study.

A common mistake

It really is not difficult to address this concept of 'added value', but unfortunately a common mistake by students is to omit any clear reference to the importance of what they are doing and instead, at best, tentatively hint at the worth of their dissertation. *BE BOLD!!* Either have a paragraph or two, or a subsection (e.g. 'Value of This Research') wherein you state the worth of your work.

In what ways could your work *add value*?

- It could be that the area you have picked to research is lacking in critical investigation.
- Or you that are looking at a subject from a different angle.
- Or that your chosen research area is topical and urgent (e.g. addresses important medical issues or current computer security problems).

You need to state why you think your research is important and worth doing. Think in terms of who will benefit from your work and in what ways it will shed light on specific research issues. State quite categorically why you consider your research to be worth doing: 'This research is important for a number of reasons . . .' or 'This research adds value to current research in a variety of ways . . .'.

There are a number of ways that you can tackle the question of added value. If your research is a mix of theory (i.e. reading about your problem area) and practical work (e.g. interviewing people or creating a model of something), you could break down the importance of your research into two areas: first, why your Literature Review (or equivalent) is important and, second, why your empirical research is important.

Let's deal with the importance of your Literature Review first. When explaining the importance of your Literature Review:

- Refer to your individual research objectives and how the Literature Review will help meet them.
- But also explain the *overall* importance of your Literature Review. Perhaps it provides a coherent perspective on a subject area that has previously received scant attention, producing a deeper intellectual understanding; or it meets an urgent need to address a topical subject, e.g. medical research or computer security issues.
- Explain the value of your specific subsections (e.g. barriers to e-Learning).

In other words, explain why you need to do a Literature Review, the areas that you intend reviewing, and the benefits to the research community and others (e.g. the business community) of this academic research.

Now for the importance of your practical work (if you are doing anything practical). Whereas students sometimes find it difficult to justify a Literature Review (and so tend not to), they find it is much easier to justify the worth of empirical research:

- It may be that your particular empirical research activity is unique and will provide a valuable insight into a problem area, although your research does not need to be unique to be of value.
- It may be that your empirical research will complement the work of others.

- Or there is a call for practical research in your area (e.g. from other researchers complaining about the paucity of practical research in your chosen field).
- You can also argue in terms of the value of comparing and contrasting theory (i.e. your Literature Review) with practice (i.e. your empirical work). Where possible, show evidence of support for your empirical research.

Or, rather than arguing separate cases for the value of your theoretical and practical work, you could alternatively summarise how your work will add value with *implicit or explicit reference to your individual research objectives*:

> This research work will contribute to the development of the discipline of e-Learning in a number of important ways: first, by providing a critical review of issues pertinent to the implementation of e-Learning (what is driving e-Learning and what can act as a barrier); second, by critically examining existing models and frameworks to support academic staff; third, by obtaining the views of a variety of staff stakeholders on existing practices in e-Learning, a rich picture of e-Learning can emerge, allowing a meaningful comparison between theory and practice, from which an improved understanding of e-Learning issues in higher education can be derived, particularly with regard to academic staff training and support in preparing for e-Learning.

Or you could simplify things by providing a general statement highlighting a generic benefit of your research to the research community, as in the sample Introduction in Appendix G:

> This research will benefit the academic research community by contributing to the field of e-Learning in the area of academic staff preparation. The results of this work – secondary and primary data – can be used to enrich existing research schemas, particularly in relation to staff preparation models/frameworks and staff views, thus adding incrementally to the knowledge base of e-Learning research.

Followed by benefits to specific stakeholders (in this case, managers, academic staff and students):

> Although the output from this research work cannot be generalised, nonetheless the literature review findings and the empirical case study can act as a focus to inform elite staff in universities on potential staff e-Learning preparation issues, encouraging management to revisit how they prepare academic staff to engage fully with e-Learning. Other beneficiaries include: academic staff themselves who will gain from recommendations that reflect their concerns on support issues; and, ultimately, students. If staff are better prepared to deliver e-Learning programmes, then that augurs well for the student experience.

> This work will raise the profile of an area of educational delivery – e-Learning – that Vermeer (2000, p. 329) once decried had often been dependent on 'the enthusiasm of the recently converted' for its success. Technology is increasingly at the heart of university education and this research will benefit all those with an interest in ensuring that technology is exploited by fully trained academic staff.

As you can see, there are different ways to choose how to write about the value of your research, namely:

1 Justify the theoretical and practical aspects separately.
2 Justify with reference to your individual research objectives.
3 Justify with reference to the benefits to the research community (in your field) and the benefits to specific stakeholders (e.g. managers, customers, the public, etc.).

Which approach you choose is up to you. You can even mix and match. The important thing to understand is that by pointing out the value or importance of your intended research, you will help the reader understand why you have chosen to research a particular topic.

A word of caution. Do not depend on your supervisor to find your background reading for you, or help you to identify your research objectives, or tell you why your research is worth doing. If you do so, you may end up adopting this lazy approach throughout the duration of your dissertation. You might think it is a great idea to find such a helpful supervisor, but there is a potential problem with this approach. When you finally submit your work, you may lose marks for showing a lack of independence. Therefore, if you are interested not just in passing your dissertation, but also in gaining good marks, then avoid over-dependence on your supervisor for material and instruction.

That is not to say that your supervisor cannot advise you on the relevance of your material or attempt to guide you in the right direction by, on occasion, referring you to pertinent articles/reports, etc., but there is a line between guidance and spoon-feeding that, if repeatedly crossed, undermines the claim that your dissertation is an 'independent piece of research'. Detailed feedback is a different matter altogether: it is providing commentary on your work, not presenting solutions.

A further suggestion

You should take every opportunity to gain marks. Another way to enhance your dissertation Introduction is by tagging on, at the end of your Introduction, an outline of each chapter in your dissertation. You can do this by typing up the headings for each chapter, and then, as you make your way through your dissertation, go back and summarise the content of each chapter in turn.

If the Introduction of your dissertation has as its structure the subsections 1.1 Background; 1.2 Research focus; 1.3 Overall research aim and individual research objectives; 1.4 Outline research methods and timescales; and 1.5 Value of this research, then this new subsection (call it 'Outline structure') would initially contain just your chapter headings. Example:

1.6 Outline Structure	
Chapter 1	Introduction
Chapter 2	Literature Review
Chapter 3	Research Methods
Chapter 4	Case Study Results: Academic Staff; Elite Staff
Chapter 5	Conclusion
Chapter 6	References

As you complete each chapter, you are then in a position to write down the areas that were addressed in that chapter. Note that you are not summarising the content of each chapter in your outline structure, in terms of views expressed etc.: you are merely providing the reader with a statement of the main topics addressed:

1.6 Outline Structure	
Chapter 1	Introduction This chapter provides the reader with *background* information on the impact of e-Learning on the traditional teaching and learning paradigm in the university environment, including an illustration of some drivers and barriers and the need for an understanding on how staff are being prepared to make the switch from *sage on the stage* to *guide on the side*. The *focus* of this research is discussed and justified and the *overall research aim* and *individual research objectives* are identified. *Research methods and timescales* are outlined, as is the *value of this research*.
Chapter 2	Literature Review
Chapter 3	Research Methods
Chapter 4	Case Study Results: Academic Staff; Elite Staff
Chapter 5	Conclusion
Chapter 6	References

In this example, the main things that were discussed in the sample Introduction chapter in Appendix G have been highlighted: *background* information,

research focus, the *overall research aim and individual research objectives*, *outline research methods and timescales*, and *value of this research*. These topics were easily obtained from the subheadings in the sample chapter.

Similarly, once you have completed your Literature Review, go back to your introductory chapter – Chapter 1 Introduction – and complete the relevant part of your outline structure. Once again, do this by identifying the key topics in your Literature Review, i.e. just take the subheadings that you created in your Literature Review chapter and lift them to form the basis of your outline structure. Example:

1.6 Outline Structure	
Chapter 1	Introduction This chapter provides the reader with *background* information on the impact of e-Learning on the traditional teaching and learning paradigm in the university environment, including an illustration of some drivers and barriers and the need for an understanding on how staff are being prepared to make the switch from *sage on the stage* to *guide on the side*. The *focus* of this research is discussed and justified and the *overall research aim* and *individual research objectives* are identified.
Chapter 2	Literature Review This chapter *defines* the term e-Learning, discusses *distance learning* (a driver for e-Learning), clarifies the *drivers* for e-Learning (including major reports, strategic forces, and the benefits of e-Learning to different stakeholders), explores *barriers* to e-Learning, evaluates *guidelines and models* on e-Learning support infrastructures in relation to providing support for academic staff preparation, and *justifies the need for empirical data* on academic staff preparation issues.
Chapter 3	Research Methods
Chapter 4	Case Study Results: Academic Staff; Elite Staff
Chapter 5	Conclusion
Chapter 6	References

Every time you finish a chapter in your dissertation, return to your Introduction to complete the relevant part of your outline structure. Appendix H contains a completed example of an outline structure. Remember to reduce the content to fit into the number of words that you have to play with. Not only is an outline structure helpful to the reader, importantly it can also get you extra marks. It is not difficult to do, and is another step towards convincing your supervisor that you are a top student.

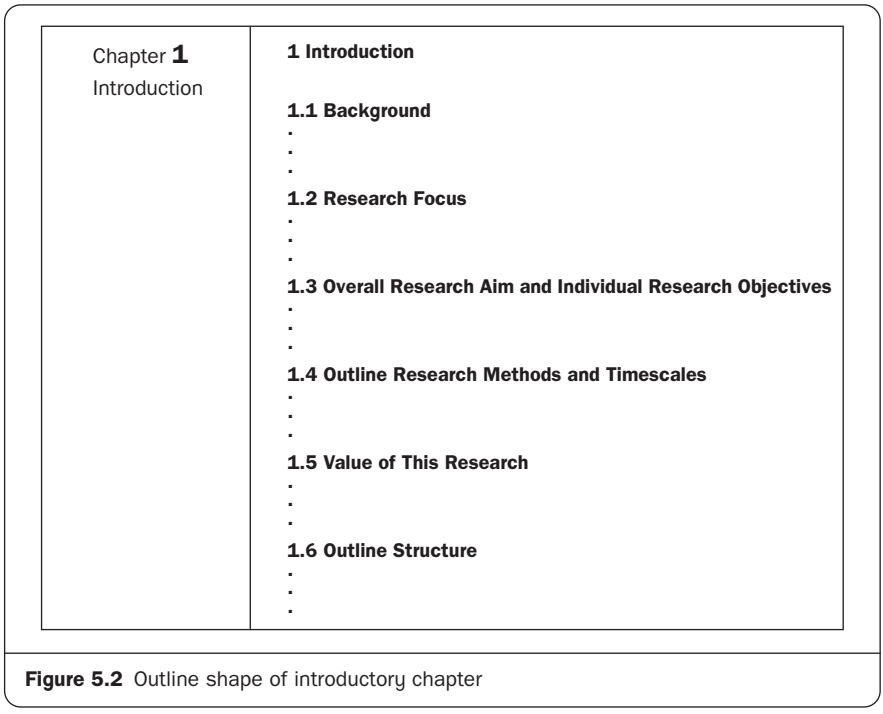


Figure 5.2 Outline shape of introductory chapter

Figure 5.2 gives you an overview of the shape of your introductory chapter. Remember, you can merge headings to suit your personal preferences and department's guidelines.

One last point. When writing your dissertation, you need to decide on the *tense* used:

- You can write in the past tense ('This dissertation *investigated* . . . The research objectives *were* . . . The Literature Review *highlighted* the need . . . The research methods *used* included . . . The results *showed* that . . .')
- Or you can write in a tense that reflects the natural course of events, like an unfolding story, depending on where you are in your dissertation. For example, when you write your Chapter 1 Introduction you have not started your research work, so you can use a tense to reflect that fact: 'This dissertation *will* examine . . .'; and after you complete any empirical research, you then write in an appropriate tense: 'The results of the interviews *show* that . . .', etc.

In other words, you can either complete your research work then write it up in the past tense or write it up as you go along using a tense that is appropriate to where you are in your dissertation and what you are doing, will do, or have done. However, check with your supervisor first, in case your department has a preference.

Checklist

The dissertation Introduction

1 Created structure for Introduction ✓
2 Background information ✓
3 Clarified research focus ✓
4 Stated overall aim of research ✓
5 Identified individual tasks needed to complete overall aim ✓
6 Outlined research methods to be used to meet objectives ✓
7 Indicated timescales using table or chart ✓
8 Put the case for the value of this research ✓
9 Created outline chapter structure ✓

Summary of key points

- The *introductory chapter* to your dissertation should present the following information: background; research focus; overall research aim and individual research objectives; outline research methods and timescales; and the value of your intended research.
- The '*Background' subsection* to your Introduction should place your research area in context, referring to relevant literature sources using a variety of direct and indirect referencing techniques.
- The '*Research focus' subsection* of your Introduction can be combined with the Background subsection, or placed in a separate subsection. It establishes the subject of your research.
- The '*Overall research aim and individual research objectives' subsection* of your Introduction clarifies your research focus in simple terms, where your main research aim is identified and the specific research objectives needed to complete your main aim are enumerated. Both your overall aim and your individual research objectives can be converted into research questions.
- The '*Outline research methods and timescales' subsection* provides an overview of the research methods that you will use to do your research, including time estimates to complete the major research tasks.
- Next, a subsection, or a paragraph or two placed in previous subsections, should be devoted to explaining *the value of your research*, i.e. why you think your research is worth doing (think in terms of the beneficiaries of your work).
- Finally, if you wish you can create *a template outline chapter structure*, the details of which you complete as your progress through your dissertation. The outline structure highlights the topics covered in each of your chapters. You can get these topics from your subsection headings.

Chapter 6



The Literature Review

• What constitutes a good Literature Review? • Structuring your Literature Review • The language of academic discourse • Description vs critical evaluation • Learning theory and your dissertation • Literature search techniques • University library databases • Concluding your Literature Review • Contextual Review • Systematic Review • Checklist • References • Further reading • Summary of key points

This chapter will show you how to succeed with your Literature Review. Two other types of review are also discussed – a Contextual Review (a variation on the traditional Literature Review) and a Systematic Review (used primarily, although not exclusively, by health-related disciplines).

What constitutes a good Literature Review?

What advice can one give about writing a Literature Review? It would certainly help if you understood the point of a Literature Review. You carry out a review of literature to find out who is saying what about the things you are interested in, specifically your research objectives, and to convince your supervisor/marker that you have read widely, and in depth, and that you have the necessary skills to both interpret and evaluate such literature.

A *good* Literature Review is characterised by the following features:

- It lays out what research has been done by others *relevant to your research aim/objectives* (why waste your time discussing irrelevant stuff?).
- It presents the work of others in a *clear*, *interesting* and *progressive manner* (to build up a coherent/logical picture).

- It provides evidence of *in-depth critical evaluation* (to show that YOU can give an opinion and support it with argument/evidence).
- It highlights *pertinent/emerging issues* (otherwise what is the point of your Literature Review?).
- It *cites a variety of relevant sources properly* (to show that you are well-read and scholarly in your approach).

Below are examiner comments complimenting aspects of various student Literature Reviews, comments that you want to see written on your marked dissertation:

- '*Highly focused* Literature Review . . .'
- 'Clear evidence of *critical evaluation* . . .'
- '*Logical* structure . . . *eliciting* main issues . . .'
- 'Well done! An excellent *in-depth* review of *relevant* literature, supported by *properly cited* sources . . .'

Conversely, a *bad* Literature Review exhibits too many of the following (bad) practices:

- 'Irrelevant rambling' (i.e. what we call '*student drift*').
- 'Ideas presented in no particular order' (and so difficult to follow the thread of the student's discussion).
- 'Too descriptive' (with no/little attempt to give an opinion, much less support it with reasoned argument).
- 'Ends abruptly, devoid of any clarification of main findings.'
- 'Limited sources used (mainly websites), coupled with inconsistent referencing styles.'

The following are other examiner comments highlighting deficiencies in student Literature Reviews (comments you hope do not appear in your marked work!):

- 'Poor standard of referencing.'
- 'Too descriptive in nature.'
- 'No evidence of critical evaluation.'
- 'Lacks focus.'
- 'Limited use of sources.'
- 'Superficial discussions.'

This chapter will now show you how to succeed with your Literature Review. Referencing was covered in Chapter 4 'Plagiarism and referencing'. Let us first of all turn to a fundamental task: how to structure your Literature Review.

Structuring your Literature Review

There is an impulse to start searching for any literature that vaguely relates to your general research topic. This is a mistake. Refrain from this impulse because you will waste precious time wandering down literary blind alleys. Instead, you need to establish a strategy of attack that is focused and efficient. To that end, you need to work out which of your research objectives will be covered in your Literature Review, structure your Literature Review accordingly, and then, and only then, start searching for literature to address those specific research objectives. In that way you will be targeting literature sources to meet well-defined parts of your Literature Review.

In terms of structure, a good Literature Review will have a brief introduction, followed by subsection headings that reflect specific research objectives, concluding with a summary highlighting emerging issues.

> **! A common mistake**
>
> Students should avoid diving into their review without warning, thus leaving the reader to work out how what they are reading relates to the student's research objectives. Try and avoid such impatience: carefully spell out to the reader the topics that you intend covering. It keeps you on the right track and lets the reader know what to expect.

The introduction to your Literature Review should be succinct and clear of waffle. Simply remind the reader – i.e. your supervisor/marker – of your research objectives and the areas you will cover in your Literature Review. Typically, not all of your research objectives will be addressed in the Literature Review: some may relate to empirical work and your overall findings. Remember to point out the value of your review. By pointing out what you will be covering, you will have a reference point to help you achieve focus, which is so important in a Literature Review. It is not uncommon for students, halfway through their Literature Review, to forget about their stated objectives and wander into other areas that, although interesting, are largely irrelevant to their work (as well as eating into their word count).

Appendix I contains a fitting example of an introductory section to a Literature Review. It refers back to the previous chapter, re-lists the research objectives, indicates which objectives will be tackled within the Literature Review, and reiterates the value of the Literature Review topics, and so places the relative importance of the Literature Review within the context of the dissertation.

! A common mistake

A common mistake by students is to stray from their intended research focus. Too often supervisors witness muddled dissertations that meander aimlessly and fail to keep the reader focused on the student's initial research objectives. Avoid that mistake by creating subsection headings tailored to your research objectives.

As mentioned, a simple but clever way to avoid the pitfall of *student drift* is to create subsection headings in your Literature Review chapter to reflect specific research objectives. This makes it difficult to stray from what you are supposed to be writing about.

This is a good time to bring to your attention the academic concept labelled *coherence*. This concept refers to the logical presentation of ideas. If your dissertation is coherent, then the content accumulates progressively, with each part leading sensibly into the next part, to form a unified whole. If your dissertation is incoherent, then it is a rambling mess. You want your dissertation to be coherent.

Let's address an obvious way towards achieving coherence: through structuring. If you structure your dissertation properly, then that will help to keep you on track and minimise the chances of student drift, i.e. going off at a tangent. Relevance is the key to coherence, and the way to maintain relevance is to focus on what you said you would do in your dissertation, and the way to be focused is to make sure that your dissertation structure reflects your specific research objectives.

Taking a step back for a moment, the first opportunity to keep your dissertation focused occurs when you create the overall structure for your dissertation. If you said that you would do a Literature Review and that you will also carry out your own empirical study, then a structure that allows your dissertation to flow logically, could be:

Abstract
Chapter 1: Introduction
Chapter 2: Literature Review
Chapter 3: Research Methods
Chapter 4: Findings
Chapter 5: Conclusion
References
Appendices

When you then go on to break down the individual chapters, the content within each of the chapters should also exhibit coherence, i.e. each part should be relevant, make sense and cumulatively add to the whole (chapter), and transparently so. Once again, an obvious way to achieve that aim is to

create appropriate subheadings to keep you focused and relevant. For instance, the breakdown of Chapter 1: Introduction could have the following subheadings, as discussed in Chapter 5 of this book:

1 Introduction
- 1.1 Background
- 1.2 Research Focus
- 1.3 Overall Research Aim and Individual Research Objectives
- 1.4 Outline Research Methods and Timescales
- 1.5 Value of This Research

Now that you have an overall structure for your dissertation, and a structure for your introductory chapter, the structure for the remaining chapters will depend on what you set out to do, and that, in turn, comes from looking at your research objectives. Let's now concentrate on how to structure your Literature Review by revisiting the research objectives listed in the sample Introduction in Appendix G (itself based on the Sample Dissertation Proposal in Appendix B):

> Within the context of higher education, the specific objectives of this research are to do the following:
>
> 1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
> 2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
> 3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
> 4 *Formulate* recommendations on staff preparation issues.

The first two objectives were to be tackled in the Literature Review chapter, while objective 3 would be implemented through the collection and analysis of empirical data (e.g. case study). Therefore, the structure for that Literature Review concentrates on the first two objectives.

Sometimes objectives overlap. For example, in this case, as a result of objective 2 (evaluating staff preparation models), it is likely that you would come across recommendations by authors on how to prepare staff for e-Learning. The results of this objective therefore also contribute to answering the last objective, objective 4. It is quite common in the Literature Review to find some of the answers you seek in other objectives. Completing an empirical study would then allow you to compare theory with your own empirical research findings, and so add your own recommendations.

Research objective 1 about e-Learning drivers and e-Learning barriers, naturally divides into two related subsections. *E-Learning drivers* could form one subsection and *e-Learning barriers* another subsection. Taking into account the brief introduction, then right away you have three subsections to

your Literature Review chapter. If your Literature Review chapter was called Chapter 2 – Chapter 1 being your dissertation Introduction – then these three subsections could be numbered as follows:

2 Literature Review
- 2.1 Introduction
- 2.2 Forces Driving e-Learning in Higher Education
- 2.3 Barriers to Delivering e-Learning Programmes

It is your choice whether or not to number the subheadings but it does make it easier for you and your supervisor to discuss specific parts of your dissertation without any ambiguity.

Next, look at what subsections could be created from your second objective ('*Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning'). An appropriate subsection appears in 2.4 below, once again lifted directly from the research objective to ensure that you stick rigidly to what you said you would do:

2 Literature Review
- 2.1 Introduction
- 2.2 Forces Driving e-Learning in Higher Education
- 2.3 Barriers to Delivering e-Learning Programmes
- 2.4 Models/Frameworks to Support Academic Staff

By explicitly linking your subsection headings to your research objectives, you ensure that your work will be very focused, thereby reducing the opportunity for waffle and student drift. In other words, the structure of your dissertation gives the impression of logical progression (= coherence = good marks).

Finally, it would be useful to conclude your Literature Review with a brief subsection summarising your key points and highlighting emerging issues:

2 Literature Review
- 2.1 Introduction
- 2.2 Forces Driving e-Learning in Higher Education
- 2.3 Barriers to Delivering e-Learning Programmes
- 2.4 Models/Frameworks to Support Academic Staff
- 2.5 Summary and Emerging Issues

Figure 6.1 illustrates this linkage between the specific research objectives in the example and the corresponding structure of the Literature Review, thus minimising the danger of sleepwalking into wasteful and unrelated discussion.

You can include other subsections as you see fit. One such subsection commonly seen in student dissertations, to avoid ambiguity on terms used, is a subsection on definitions. For instance, the example above is about e-Learning,

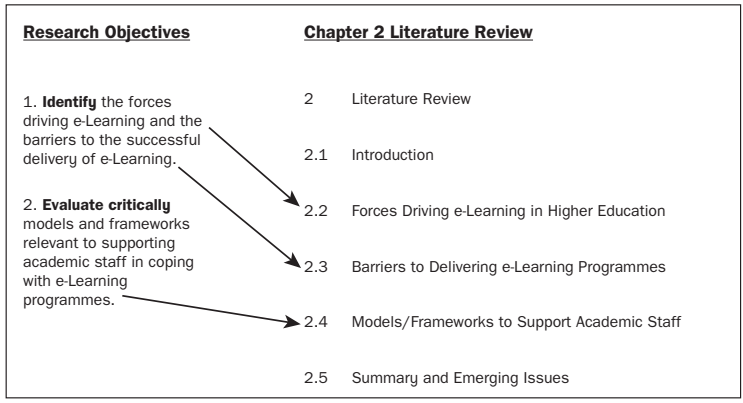


Figure 6.1 Linking research objectives to chapter subsections

so an early subsection entitled 'Defining e-Learning' could be inserted after the Introduction:

2 Literature Review
2.1 Introduction
2.2 Defining e-Learning
2.3 Forces Driving e-Learning in Higher Education
2.4 Barriers to Delivering e-Learning Programmes
2.5 Models/Frameworks to Support Academic Staff
2.6 Summary and Emerging Issues

If your topic was, say, 'accessibility and website design', then you may wish to have a subsection on what you mean by 'accessibility'. Similarly, if your research is focused on 'modernism and its impact on contemporary art', then a good starting point could be a subsection on defining what you mean by 'modernism' and/or 'contemporary art'.

Now you have a very structured, focused and logical approach to your Literature Review (= good marks), one that ought to prevent Literature Review 'drift'. Of course, as you complete your individual subsections, it is likely that you will also create subsections within subsections. For instance, in subsection 2.3 above – Forces Driving e-Learning in Higher Education – an appropriate collection of lower-level headings could be:

2 Literature Review
2.1 Introduction
2.2 Defining e-Learning
2.3 Forces Driving e-Learning in Higher Education
2.3.1 An Early Impetus: The Dearing Report

2.3.2 Strategic Forces Driving e-Learning
2.3.3 Benefits of e-Learning
2.4 Barriers to Delivering e-Learning Programmes
2.5 Models/Frameworks to Support Academic Staff
2.6 Summary and Emerging Issues

One thing to bear in mind when you create further divisions – if you are not writing very much within each subsection, then your Literature Review will appear superficial and thus lacking depth. One student (who rarely turned up for pre-arranged meetings) had about 20 subsection headings in a draft Literature Review submission, with each of the 20 subsections containing only two or three sentences. Try and avoid writing a subsection that contains only one or two sentences. Example:

2.2 Research Aim
The aim of this research is to investigate current approaches to the development of business information systems (IS) within the public sector in terms of their cost-effectiveness.

In such a scenario, you need to remove a number of your subheadings and merge others. Remember, in your Literature Review you are trying to convince your supervisor that you are well-read and that you can critically review the work of others, which you can only do if you engage in meaningful discussion under each subsection. Of course, deficient structuring and superficial comment are not confined to the Literature Review. Here is the type of structure and content that students can unwittingly replicate in their chapter on research methods:

3.2 Research Philosophy
3.2.1 Phenomenology
[Two sentences on phenomenology]
3.2.2 Positivism
[One sentence on positivism]
3.2.3 Research Philosophy
[Two sentences on research philosophy], etc.

When you start to write the content of your dissertation, the *linking of themes* from one section to the next, and use of *linking words*, will also help towards achieving a smooth flowing dissertation. These linking mechanisms – linking themes and using linking words – help knit the parts of your structure together. Rather appropriately, they come under the label *cohesion*.

Linking themes

Themes are just topics. Each chapter in your dissertation will cover a different topic because each chapter will serve a different purpose in your dissertation.

Similarly, each subsection in each chapter will differ in some respect. You can link the themes between chapters, and between subsections in chapters, by indicating how the next chapter/subsection follows from the previous chapter/subsection. For example, at the end of your introductory chapter or at the beginning of your next chapter, you might write, as in the sample introduction to the Literature Review in Appendix I:

> Chapter 1 placed this research in context and identified four research objectives for this dissertation. This review of literature focuses on objectives 1 and 2 below . . .

Similarly, at the end of the Literature Review, or at the beginning of the Research Methods chapter (or both!), you can link the themes. For example, the sample Literature Review Conclusion in Appendix J ends by referring to an emerging issue as a result of the Literature Review and how the next chapter will help to address that issue.

> There is a continuing need for empirical data on how academic staff are preparing for e-Learning, and the aforementioned review of literature supports this claim. Empirical research will now be carried out to find out how academic staff are preparing for e-Learning in practice, what motivates them to do so, and, from a wider perspective, the drivers and barriers acting on the university environment in relation to developing e-Learning programmes. The next stage of this research will detail the research methods to be used to capture this data, including details on the research strategy, data collection techniques, sample selection, and management of the researcher's role.

Similarly, within chapters you can link one subsection to the next where you feel it is necessary (sometimes the subheadings are all that is required). For example, if you had just completed a subsection on the benefits of e-Learning and your next subsection is on the barriers to e-Learning, you might link the two topics with the following opening sentence:

> **2.4 Barriers to Delivering e-Learning Programmes**
>
> There is some confusion about the benefits of e-Learning. Serious issues are being raised concerning possible barriers . . .

Linking words

These are also known as *transitional* (or *transition* words) because they are used to link paragraphs (although they can also be used to link sentences within a paragraph). Examples of these linking words include *additionally*, *accordingly*, *furthermore*, *however*, *notwithstanding*, and *on the other hand*. They are great at letting your audience know that you are making another supporting point (e.g. furthermore), or are now presenting an alternative point

Table 6.1 'Linking words' according to theme

Agreement	Difference	Logical flow/concluding
Additionally, again, also, along with, and, as well as, besides, by the same token, certainly, coupled with, equally, equally important, even more so, further, furthermore, in addition, in conjunction with, indeed, in fact, in like manner, in other words, in similar fashion, in the same way, likewise, moreover, more than that, not to mention, on top of, over and above, plus, similarly, together with, too, undoubtedly	Against this, all the same, alternatively, although, at the same time, at variance, be that as it may, but, despite that, even so, even though, for all that, granted, hitherto, however, in any case, in contrast, in opposition, in spite of that, nonetheless, notwithstanding, on the contrary, on the other hand, regardless, still, that is as may be, then again, though, yet	Accordingly, all in all, all things considered, as a result of, as shown above, briefly, by and large, concluding, consequently, correspondingly, finally, for that (those) reason(s), given these points, hence, hitherto, in any case, in any event, in brief, in conclusion, in light of, in the final analysis, in short, in summary, on balance, on the whole, overall, therefore, to summarise, to sum up, thus

(e.g. however) or wish to show logical progression (e.g. accordingly) or that you are now coming to a conclusion (e.g. finally).

To save you struggling for synonyms, Table 6.1 provides you with plenty of linking words to use in your dissertation. Some linking words can appear in more than one column depending on the context. For example, *hitherto* means 'up until this point', and it can be used as a simple logical link, as in *Hitherto this dissertation has explored the views of senior management; it is now timely to explore the views of those on the shop floor to see if they agree or differ*. It can also be used to introduce a contrary point, as in *Hitherto there was no serious push for independence until, that is, Burns produced his revolutionary pamphlet.*

The language of academic discourse

A word of caution about the language that you use in your Literature Review, particularly when referring to the work of others. If you write, 'Cunningham (2020) *discovered* that . . .', then you are accepting as fact that Cunningham did discover something. Alternatively, if you were to write 'Cunningham (2020) *states* that . . .', then you are taking a safe, neutral stance about the claim that Cunningham discovered something. Or, if you want to be even more cautious, you can write 'Cunningham (2020) *appears to suggest* that . . .'. When you are cautious

Table 6.2 Hedging

Definitive language	Cautious language
Money is the root of all evil	It is often said that money is the root of all evil
Muhammad Ali is the best boxer of all time	Muhammad Ali is arguably the best boxer of all time
Dawson (2019) confirms the link between promotion and accent	Dawson (2019) claims a link between promotion and accent

about the claims you make when referring to the work of others – or indeed your own work – then you are doing what is called *hedging* your words. It comes from the term *hedging your bets*, meaning not overly committing yourself.

Table 6.2 makes clear the difference that language can make in a sentence. Compare the sentences in the left-hand column of Table 6.2 against those in the right-hand column that have been rewritten using more cautious words and terms.

There is nothing wrong, per se, in using language to show that you agree with something if that is the message that you want to convey to your reader. However, if what you write is not universally accepted, then you may have to defend your position; if you fail to do so, then your own writing may be attacked on the grounds that it contains unsubstantiated assertions. Hedging is one way to play safe.

At some point, though, you will need to put your head above the parapet and express an opinion. What you are then expected to do is to provide evidence in support of that opinion. In such a scenario you have three basic options:

1 You could use neutral language to introduce someone's position, e.g. *Eastwood (2017) believes that capitalism* . . . then state whether you agree, disagree or partially agree, and why.
2 Or, you could still be cautious while at the same time expressing an opinion, e.g. *Eastwood (2017) leans towards the view that capitalism, with some justification, is to blame for global warming.* Once you declare your own view, you are required to defend that view, in this case to expand on why you say 'with some justification'.
3 Or you can give your view immediately by boldly asserting your position outright, e.g. *Eastwood (2017) is right to blame capitalism for global warming.* Once again, you would provide evidence to support your claim.

When it comes to commenting on your own contribution, try not to go overboard. It is not uncommon to read a dissertation concluding with the sentence 'This dissertation has proved . . .'. Proving something is a high bar to overcome. If you haven't proved anything, then don't use the word 'proved'. You can still conclude with a strong supporting statement on the value of your work using

Table 6.3 Neutral words

advocates	alludes	argues	articulates	asserts
believes	comments	concludes	considers	contends
defends	describes	discusses	examines	explains
explores	expresses	highlights	identifies	iterates
lists	outlines	presents	questions	reckons
recommends	regards	reiterates	repeats	sees
states	summarises	underlines	views	writes

cautious language, e.g. 'This dissertation provides strong evidence in support of the thesis that . . .'.

Referring to sources is another issue. More often than not, when students describe the sources that they have read, they tend to re-use the same two or three verbs, again and again, such as the neutral 'Thomson (2004) *states* that . . .' or the telepathic 'Thomson (2004) *thinks* that . . .' or the lazy 'Thomson (2004) *says* that . . .'. Table 6.3 contains a list of neutral verbs that you can use to stop you repeating the same two or three verbs *ad nauseam*.

The verbs in Table 6.3 are 'safe' verbs and can be used to report on what you have read. If you want to express a more cautious opinion, then you can use words such as *appears*, *implies*, *inclines*, *infers*, *leans*, *lends*, *seems*, *suggests*, *tends*, and *verges*. For example, the word *appears* could be used as follows: *Johnson appears to be claiming that intelligence is hereditary*.

To facilitate your caution, you can make use of terms such as *according to*, *as indicated by*, *it would appear*, *it may be said*, *it may seem*, as well as adverbs such as *apparently*, *arguably*, *conceivably*, *likely*, *maybe*, *perhaps*, *possibly*, and *usually*.

You can also use the verbs *may*, *could*, and *might* to soften your language. We use *may*, *could*, and *might* to indicate that something is possible: *Abbot may be wrong*; *Rafford's claims could have serious consequences*; *Crawford's theory might mean that viruses 'think'*. Technically, these verbs suggest different degrees of possibility. Example:

May	It is likely that something will happen.
Could	It is less likely that something will happen.
Might	It is even less likely that something will happen.

War may come.	It is likely that war will come.
War could come.	It is less likely that war will come (but it is a distinct possibility).
War might come.	It is even less likely that war will come (but we cannot discount it).

The main thing to note is that *could* is stronger than *might*. *May* is more likely to be seen in formal written British English than American English. The reality

is that the terms are often used interchangeably to mean that there is a possibility of something, so don't lose sleep over deciding which one to use.

Academics tend to err on the side of caution, but if you are confident that an author has established a particular position, then by all means use words to express agreement such as *clarifies*, *confirms*, *establishes*, and *validates*. You can also use more positive words in support of an author's work, such as *excels*, *illuminates*, and *triumphs*. Table 6.4 lists numerous examples of words that imply support for an author's work.

Similarly, you can use more descriptive words to criticise someone's position (or to describe their view of someone else's work), such as *blusters*, *confuses*, and *waffles*. There is nothing wrong with expressing disapproval of someone's work, or of assigning these views to others, providing that you support your assertions. Tables 6.5 lists plenty of words that you can use to cast an author's work in a negative light.

Table 6.4 Supportive words

clarifies	confirms	demonstrates	determines	establishes
excels	fortifies	grasps	helps	illuminates
inspires	justifies	masters	merits	outwits
penetrates	perfects	pioneers	proves	recognises
reveals	secures	shows	slays	solidifies
solves	squares	stimulates	strengthens	succeeds
sustains	transcends	transforms	triumphs	uncovers
unearths	unifies	unites	validates	vindicates

Table 6.5 Negative words

blusters	clings	concocts	conflates	confuses
conspires	contrives	dodges	drifts	embellishes
exaggerates	fails	gambles	gilds	hampers
hikes	hinders	impedes	inhibits	lapses
lectures	limps	milks	miscalculates	misfires
misinterprets	misjudges	misreads	misrepresents	misuses
moans	obfuscates	obsesses	pontificates	prances
prevaricates	rants	relapses	shirks	shuns
skirts	spins	squanders	struggles	waffles

On the matter of which words to use, it is punctuation that allows you to glue your words together. Punctuation is the use of marks, such as a full stop (.) or a colon (:) or a semi-colon (;), to clarify meaning in a sentence. As it is a Master's dissertation that you are doing, it is more than likely that your competence on punctuation is up to scratch. Nevertheless, over time it is very easy to forget the differences between a colon and a semi-colon, *its* and *it's*, round brackets and square brackets, or the difference between a comma and an Oxford comma. As a refresher on punctuation, Appendix K summarises the role of common punctuation marks.

Structure, an understanding of the language that you use, and knowledge of how to punctuate that language, all help form the basis of a good Literature Review. A good Literature Review, though, requires depth, and for that you need to advance beyond mere *description* of what you have read and show evidence of *critical evaluation*.

Description vs critical evaluation

Before you can critically evaluate a source, you need to cite it. It is important to let the reader know when you are about to quote someone. If you are embedding a quotation in your sentence, then you can do so as follows:

> Thomson (2005, p. 345) has a cynical view of e-Learning: 'it is a big con'.

If the quotation is long (three or more lines), then introduce the quotation to the reader as shown in the following example.

> The Dearing Report (1997, p. 202) foresaw benefits of using ICT in higher education:
>
> > . . . we believe that the innovative application of . . . C&IT holds out much promise for improving the quality, flexibility and effectiveness of higher education. The potential benefits will extend to, and affect the practice of, learning and teaching and research.

Alternatively, you can place the citation at the end of the quotation:

> An influential report foresaw the benefits of using ICT in higher education:
>
> > . . . we believe that the innovative application of . . . C&IT holds out much promise for improving the quality, flexibility and effectiveness of higher education. The potential benefits will extend to, and affect the practice of, learning and teaching and research. (The Dearing Report, 1997, p. 202)

! A common mistake

Too often students use quotations without any warning or explanation, which they then compound with poor referencing, a typical example of which is:

> Software Piracy can be defined as the unauthorised copying, reproduction, use, manufacture or distribution of software products. (Source: Microsoft)

What is wrong with that quotation? In the first place, the Harvard style of referencing (author-date system) has not been applied properly: it should have read (Microsoft, 2004) instead of (Source: Microsoft). In fact, if you are quoting a literary source, then you ought to give the page reference as well, e.g. (Microsoft, 2004, p. 12). However, the main problem with the quotation is that it forms a sentence on its own, with nothing before the quotation to prepare the reader and no comment on the quotation itself.

By all means, quote sources but do so in a helpful manner by applying proper citation conventions. Just as bad is the overuse of quotations. If your Literature Review is full of other people's words, then you are leaving little room for your own voice to be heard. Supervisors want to know, *inter alia*, what YOU think about the literature that you are reading, so use quotations sparingly and as supporting material for YOUR discussion. It is YOUR dissertation, so let YOUR voice come through.

What separates a good student from an average/poor student in the Literature Review is that the former will provide evidence of *critical evaluation* in their work, while the latter concentrates on *describing* what they have read. Here are examples of typical (negative) comments from supervisors, related to the Literature Review:

- 'Too descriptive!'
- 'Completely devoid of critical thinking.'
- 'Superficial discussion with little in the way of critical thought.'
- 'Interesting thesis let down by uncritical acceptance of relevant literature.'
- 'Referencing is shoddy and further complicated by thin assessment of important issues.'
- 'Student concentrates on describing issues to the detriment of reasoned argument.'

What is the difference between *critical evaluation* and *description*? Imagine that you have started your Literature Review, its focus is on e-Learning, and that you have decided that one of the first things that you will do is to define e-Learning. You write the following piece of text:

> Charles Clarke, the Education Secretary, in a foreword to a consultation document on e-Learning (Department for Education and Skills, 2003a, p. 1),

> defined e-Learning in the following simplistic terms: 'If someone is learning in a way that uses information and communication technologies, they are using e-Learning.' According to this definition, using the Internet as a vehicle for learning would qualify as e-Learning.

The aforementioned piece of text has some admirable qualities, namely: it is clear, the referencing has been applied properly, and the quotation has been successfully embedded into the body of the text. Also, the student has provided a basic description, through an example, of what constitutes e-Learning using Clarke's definition. This piece of text would achieve pass marks.

However, it is better to go beyond mere description. To achieve decent marks, you have to show that you can *critically evaluate* other people's views. That does not mean to say that you review the work of others from a negative perspective, though on occasion that may be appropriate, but rather that you can offer your own point of view and support it with reasoned argument. For example, if the student had written the following additional piece of text (in italics for illustrative purposes) then more marks would have been gained:

> Charles Clarke, the Education Secretary, in a foreword to a consultation document on e-Learning (Department for Education and Skills, 2003a, p. 1), defined e-Learning in the following simplistic terms: 'If someone is learning in a way that uses information and communication technologies, they are using e-Learning.' According to this definition, using the Internet as a vehicle for learning would qualify as e-Learning. *Unfortunately, this definition, although having the benefit of brevity, suffers from a lack of clarity. For example, it is difficult to think of an example of technology-enabled learning that would be excluded from this definition, i.e. it is all-inclusive and therefore unhelpful in understanding what counts as e-Learning (and what does not).*

The first two sentences are the same as the previous text. The added text, from 'Unfortunately, this definition . . .' onwards, shows that the student knows how to review the work of others in a critical way. It is irrelevant whether or not your supervisor agrees with your opinion: what your supervisor wants to see from you is that you have an opinion on the literature that you are reading and that you can support that opinion. To move towards achieving top marks for your Literature Review, adopt the following technique:

(a) Describe what you are reading (to show that you can interpret what others write).
(b) Offer your views on what you have read.
(c) Support your views (i.e. demonstrate *critical evaluation*).

Here is another example that ticks all three boxes above. Once again, this is from a dissertation completed years ago, but critical thought never goes out of date – so don't be afraid to delve back over past dissertations for examples of

good practice! The use of square brackets indicates where points (a), (b) and (c) occur. (**[a]**, **[b]**, and **[c]** would obviously not appear in the original text):

> There are a number of definitions that equate e-Learning with Internet-based learning. For example, Thomas (2001, p. 2) **[a]** associates e-Learning with Internet-based learning:
>
> > *Today's learning communities gather in the virtual space provided by the Internet – communicating at the speed of thought, on a global scale. E-Learning is the most effective, efficient means ever invented for people to get the knowledge they need, at the time when they need it most, wherever they happen to be.*
>
> However, **[b]** to restrict e-Learning to Internet-based learning could lead to anomalies in deciding what is accepted as e-Learning. For example, **[c]** if a university has two groups of students studying a module, with one set learning at home through the Internet, and the other set of students learning on-campus, with both sets of students using identical 'e-Learning' software, then it would be inconsistent to classify one type of learning as e-Learning, and the other not, just because it is not Internet-based. To underline this point, WebCT's course authoring software is used over the Internet and on-campus, with 80% of its software used on-campus (Bates, 2001), indicating that e-Learning can appear in pure e-Learning environments and also be part of a traditional teaching and learning setting.

Do not overdo the critical evaluation. You are not required to evaluate critically every piece of literature that you read, or interpret and assess the worth of every quotation that you use. To do so would create unnecessary work for yourself, significantly hinder progress in your dissertation, and make for turgid reading. There are times when you describe things (usually when you want to set the scene) and there are other times when you decide to go further and comment critically on received wisdom. That judgement is for you to make, but essentially you display critical evaluation when you are involved in tackling issues that are central to your dissertation.

In terms of critical evaluation, you want to see written on your marked dissertation the following types of effusive comments:

- 'Excellent. Student not only describes pertinent issues but engages the reader with reasoned argument. Well done!'
- 'An impressive Literature Review. Relevant sources used + clear evidence of critical evaluation. Keep up the good work!'
- 'Student knows how to interpret the work of others and offer her own opinion, supported by clear and logical argument. Highly commendable.'
- 'At last your own voice is shining through! And what a voice! Enjoyed reading this work. Focused, thoughtful and worthy of publication. Superb stuff.'

In a final attempt to get across to you the importance of critical evaluation, let us explore Benjamin Bloom's theory of learning, a theory that was developed in the middle of the last century (1956) but which still has credibility today. The elements in his learning theory are used by your supervisors – if not consciously, then subconsciously – when they come to judge the worth of your submitted work. Understand this theory, and how it relates to your dissertation, and you will be better placed to exploit its elements to the benefit of your dissertation.

Learning theory and your dissertation

There is more than one way to learn how to do things. Learning a martial art, for example, can be achieved by reading books, watching videos, listening to friends talk about martial arts and, of course, through actual participation. Likewise, in the world of education there are different ways to learn. Bloom (1956) identified three broad ways in which students learn. These involve the use of the following:

1 cognitive skills (development of mental skills to acquire knowledge);
2 affective skills (development of feelings, emotions and attitudes);
3 psychomotor skills (development of manual and physical skills).

Learning about a martial art, for instance, will incorporate all three types of learning: understanding the theory of martial art techniques (*cognitive* skills); developing positive attitudes towards aspects of your chosen martial art (*affective* skills); and when you practise the physical techniques 'on the mat', you improve your *psychomotor* skills.

This is called *learning*, and it is an active process. It requires your involvement – sitting in a lecture theatre, half asleep, is *not* learning! This theory about learning is all very well, but how does it relate to succeeding with your dissertation? In the context of your dissertation, it is your cognitive skills that you are being marked on. You need to show your marker that you have them, and that you have them at a variety of levels. Bloom categorised the different layers of cognitive learning (as he saw them), which is referred to collectively as Bloom's taxonomy of learning and is illustrated in Figure 6.2, with the lowest-level skill, *Knowledge* the first step towards the highest-level skill, *Evaluation*.

Let us relate this hierarchy of learning to your dissertation. Your marker will go through your dissertation looking to find evidence of higher-level cognitive skills (such as *analysis*, *synthesis* and *evaluation*). If you stick to the low-level cognitive skills near the bottom of the pyramid, such as *knowledge* and basic *comprehension*, you will get low marks. If you exhibit higher-level cognitive skills, then you will secure higher marks. Table 6.6 illustrates examples of evidence for each of these cognitive skills in your Literature Review, ranging from 1–6 in increasing order of importance.

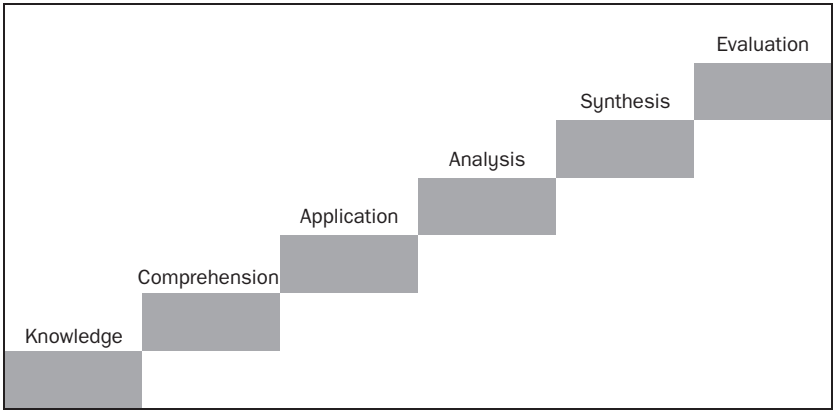


Figure 6.2 Bloom's taxonomy of (cognitive) learning

Table 6.6 Sample evidence of cognitive skills in your dissertation

Cognitive skill	Evidence (in your Literature Review)
1 Knowledge	Repeating what you have heard in a lecture. Writing down simple facts and figures. Quoting other authors. So, basic memory skills, but no evidence that you understand what you write about.
2 Comprehension	Paraphrasing what you have heard (in a lecture) or read. Summarising material in your own words, illustrating simple comprehension skills.
3 Application	Taking someone's idea or view or theory, and giving a practical example to show that you can apply this idea or view or theory. In other words, you can relate theory to the real world.
4 Analysis	Breaking down arguments into their constituent parts, dissecting an author's logic, identifying key issues in reports, surveys, articles, etc.
5 Synthesis	Bringing together strands of your argument and discussion, voiced at different stages of your dissertation, to create a coherent message to the reader.
6 Evaluation	Critically evaluating the work of other authors – combining a variety of cognitive skills above – and so presenting evidence of your ability to understand what you are reading by giving opinions and justifying them.

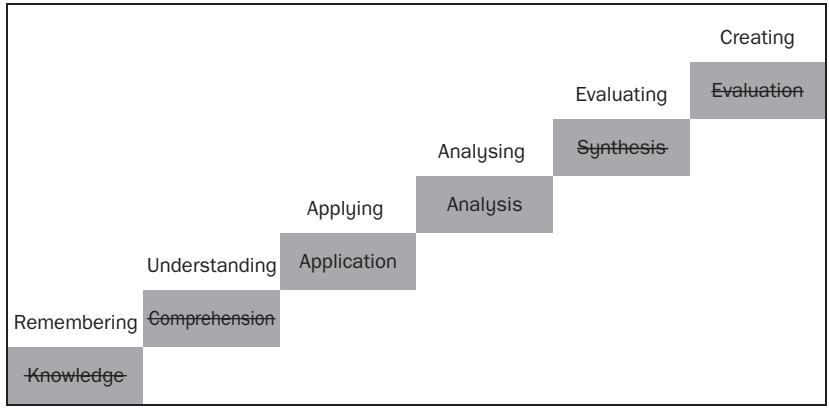


Figure 6.3 Updated version of Bloom's taxonomy of (cognitive) learning

Bloom's categories of learning have been updated, with some of the elements retained, others moved position or merged or apparently removed (Figure 6.3). This new version by Anderson and Krathwohl (2001) replaces the low-level cognitive skill *Knowledge* with *Remembering* to emphasise that this skill is really about showing memory skills; *Comprehension* is replaced with *Understanding* but basically means the same thing; *Synthesis* is removed although it is embedded in the new top-level skill, *Creating*. *Creating* does not necessarily mean that you create your own ideas, or theories, as such, but more commonly that you bring your thoughts together to create a coherent whole.

Do not worry about the subtle differences between the two models of learning: they both amount to roughly the same thing, even if the labels differ here and there. The key message you need to get from these models is that sticking to low-level cognitive skills in your Literature Review – or indeed throughout your dissertation – will get you low marks, whereas providing clear evidence of high-level skills will get you high marks.

Of course, you will need to show some memory skills (e.g. quoting the work of researchers or recalling someone's idea) but you must take the opportunity to illustrate that you have high-level cognitive skills. You do this by applying theory (through examples), analysing what you have read (to show that you can break down someone's ideas), collating your own thoughts (synthesis), all the while giving your opinion and backing it up with evidence and argument. Collectively, these cognitive activities should paint a rich picture of a critical, comprehensive and coherent review of literature relevant to your research objectives (= high marks). Hence the value of understanding Bloom's learning theory and the role critical evaluation plays in your Literature Review.

Literature search techniques

Literature is normally equated with printed published material but the emergence of the Internet has loosened the definition of literature. Digital versions of printed books now appear on the Internet (as e-books), as so do many scholarly articles, company reports and government documents; unfortunately, there are also literary sources of dubious quality. If you concentrate on the latter grouping in your Literature Review, then your work may be perceived as lacking in academic credibility.

To complete a Literature Review, you need to know how to search for literature online. Attempting a literature search with only a rough idea of what you are looking for will yield only rough results. You need to be focused and use your time wisely. An effective search of literature in whatever form – books, journal articles, reports, official publications, conference papers, theses, etc. – requires a structured approach. Figure 6.4 sets out an orderly, methodical plan for achieving an effective and efficient literature search.

Identify topic

Ask yourself, what is it that you want to know? Jot down your answer in the form 'I want to know . . .', adding what it is you want to know. Avoid queries that are too broad, such as '*I want to know* about e-Learning'. Think in terms of *subject* and *topic*, where the subject is your general area of study (e.g. e-Learning) and the topic is something that you want to know about that subject (e.g. barriers to e-Learning), yielding the query '*I want to know* about the barriers to e-Learning'. You might want to know about other things related to your research subject (e.g. benefits of e-Learning, costs of e-Learning, etc.) but when doing a literature search stick to one topic at a time. Table 6.7 gives some further examples.

Define terms

Think of the words that you are using: *employees*, *pensioners*, *policies*, etc. Are there any other similar/alternative words that could help in your search for literature? You can use a dictionary or thesaurus to help you. For example,

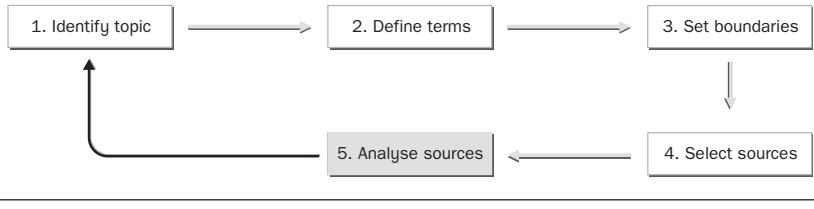


Figure 6.4 Structured literature search

Table 6.7 Topic selection

Subject	Topic	What you want to know
Equality legislation	Impact on employees	'*I want to know* about the impact of equality legislation on employees'
Pensioners	Winter Heating Allowance	'*I want to know* what percentage of pensioners applied for the Winter Heating Allowance'
Redundancy policies	Employer practices	'*I want to know* about employer redundancy policies'
University students	Plagiarism	'*I want to know* about the extent of plagiarism in universities'

occupation = work, job, employment. The alternative terms need not be an exact match. Also consider different spellings, particularly between British English and American English, such as analyse and analyze, behaviour and behavior, labour and labor, organisation and organization, theatre and theater, etc.

Set boundaries

Is timescale an issue? How far back do you want to go? What about geography? Do you need to confine your search to a particular country? For instance, you may be interested in employer redundancy practices in the USA over the last ten years.

Select sources

It makes sense to select your sources only after you have: (1) identified your topic; (2) defined your terms; and (3) set your boundaries. If you know exactly what you are looking for, then that will assist you in selecting appropriate sources. For example, the query '*I want to know* about the impact of equality legislation over the past five years on UK employees who are from an ethnic background' might lead you to a search for government publications, such as reports, as well as legal documents and journal articles referring to case studies.

Analyse sources

The information you get from your source ought to be *good* information, as opposed to *bad* information. When assessing the value of the information derived from a literature source (e.g. from an article), it is useful to measure the information against the 3Rs in Figure 6.5. Good information has the following

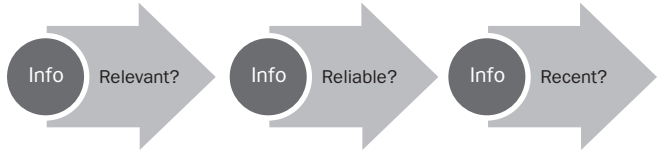


Figure 6.5 Information quality: measuring against the 3Rs

characteristics: it is relevant, reliable and recent. Bad information is information that is irrelevant, unreliable or dated.

Relevant information is information that is related to your research objectives. By this stage you ought to have created headings in your Literature Review that reflect specific research objectives. If you have a subsection headed 'The Scottish Parliament's Strategy for Tackling Poverty in Scotland', then you only include sources in that subsection that are relevant to that heading.

Reliable information is information obtained from credible sources. That is, sources that carry authoritative weight, examples of which include academic books, peer-reviewed articles and government publications, many of which can be accessed through university library systems. That does not mean that you have to agree with everything a source is telling you: indeed, you may wish to challenge underlying assumptions or projected implications.

The last criterion, *Recent*, is flexible. If you are researching activities in the distant past (e.g. First World War poetry), then obviously much of your information may not be recent. That is not to say, however, that you do not include current interpretations of poetry in the First World War. Even if your research topic is about the here-and-now, e.g. poverty in modern Scotland, sometimes it can impress your supervisor to include a very old source among your current sources, either to show that the point you are making has been held for a long time and/or that you have a sound grasp of the historical development of your subject area.

At this point it makes sense to keep a record of your selected source documents: where you got them, what they contain, and any comment – yours or theirs – you wish to highlight. The comments that you might wish to raise are ones that illustrate evidence of critical thought on your part. Crystallising your thoughts in writing will help you to understand what you are reading, with the added benefit that you will have a focused summary to act as an aide-mémoire for later use in your Literature Review. Appendix L contains a template that you can recreate using the technology of your choice (or pen and paper if you prefer). Appendix L also shows a completed example.

Google it

Or Safari it or Yahoo! it. Irrespective of the particular search engine you use, the Internet is a favourite resource for many students, so you may as well know

Table 6.8 Web links by country

Country	Entry in browser	Web address
Australia	Google Australia	http://www.google.com.au/
Canada	Google Canada	http://www.google.ca/
France	Google France	http://www.google.fr/
India	Google India	http://www.google.co.in/
Japan	Google Japan	http://www.google.co.jp/
Mexico	Google Mexico	http://www.google.com.mx/

how to use it to your advantage. The following *helpful hints* show you how to use the Internet to home in on *relevant*, *reliable* and *recent* sources.

- *Helpful hint 1*. Government websites are useful resources for getting hold of statistical data, annual reports and policy documents. To access a particular government's website, you simply enter the country's name, adding the term 'government website', e.g. Australian government website. You can be more specific and add a subject area such as health, e.g. Australian government website health.
- *Helpful hint 2*. To access a particular country's actual web space, irrespective of what you want to search for in that country, enter 'Google *country name*' in your browser. Table 6.8 gives some examples.
- *Helpful hint 3*. Using AND and OR operators.
  - **AND operator.** For an exact match you should enclose what you are after within quotation marks, separated by AND. For example, if you type *'War' AND 'Poetry'* in your browser, you will get a list of entries reflecting war poetry.
  - **OR operator.** *'War' OR 'Poetry'* will give you a listing of anything that is about war and, in addition, anything on the subject of poetry (any poetry). Using OR widens your search. It is particularly useful when you want to search for a topic that might appear under different spellings or headings: *'E-Commerce' OR 'ecommerce'*; *'Computer virus' OR 'Computer worm'*; *'Scientific experiments' OR 'Scientific trials' OR 'Scientific tests'*.
  - You can combine AND and OR operators: *'ACAS Policy' AND ('Redundancy' OR 'Dismissal')* will result in any ACAS policies on redundancy as well as any ACAS policies on dismissal. Note the use of parentheses ( ) to help clarify the conditions that you want met.
- *Helpful hint 4*. Use Google Advanced Search. Type *Google Advanced Search* in your browser. Up pops an advanced search form. The form is a way of using AND and OR but getting Google to do the hard work for you. You might want to save Google Advanced Search as a Bookmark.
- *Helpful hint 5*. Use Google Books. If you want to find out what books are in your subject area, then enter the Google Books website. In your browser,

type *Google Books*, then click on the Google Books link (or type in your country's related web address, e.g. http://books.google.co.uk, to go to Google Books directly). Options appear on your screen allowing you to be more specific, e.g. to dictate year of publication.

- *Helpful hint 6*. Use Google Scholar. If you want to be sure that what you are reading is scholarly material, then use Google Scholar. In your browser, type *Google Scholar*. You can start immediately searching for a document you want; for more control you can use the options on the screen.
- *Helpful hint 7*. You can search for articles within a specific website, if you know the website. For example, '*Divorce*' *site:nytimes.com* will bring up divorce articles in the *New York Times* newspaper. Adding *AND Year = 2020*, to give '*Divorce*' *site:nytimes.com AND Year = 2020* will confine your search to articles published in 2020. Similarly, '*Iraq*' *site:abc.net.au* will call up articles on Iraq in the Australian Broadcasting Service (ABC).

University library databases

Google, Google Books and Google Scholar are powerful free search tools not to be dismissed lightly but every university has its own collection of library databases available for student use. A university library will have a wide variety of books, journals, conference proceedings and magazines that have been ordered by academic departments to meet the needs of their students. The library should therefore be your first port of call in any search for literature. If you have not already attended a library induction course – the most useful course you will ever attend – then librarians, helpful to a fault, will carefully explain how to find what you are looking for in the library system, both on campus and online.

Your university may be so large that the online library system is partitioned into different libraries to reflect the different campuses. There may also be an agreement between your university and neighbouring universities – or even those further afield – to share library databases. Irrespective of the physical layout of your university's library, it will contain a number of in-house database collections – online and physical – as well as a point of access to external databases for which the university will pay an annual fee.

As well as the availability of subject-specific external databases, universities are increasingly making use of external multi-disciplinary databases. JSTOR, for example, is a multi-disciplinary database of scholarly material used by many universities across the globe. Web of Knowledge is another multi-disciplinary database that casts its subject-net wide: Arts and Humanities, Social Sciences, and other Sciences, including Medicine.

There is no shortage of databases for you to look at, either subject-specific or multi-disciplinary. A list of external research databases by discipline, including some well-known multi-disciplinary databases, is shown in Table 6.9. You can save yourself time by asking your supervisor about the research databases that best serve your discipline.

Table 6.9 External research databases

Subject	External databases
Arts & Humanities	ASSIA (Applied Social Sciences Index & Abstracts), Art & Architecture Complete (EBSCO), ARTbibliographies Modern (ABM), Arts & Humanities Citation Index (A&HCI), British Humanities Index, Humanities Abstracts (EBSCO), MLA International Bibliography, Social Services Abstracts, Social Work Abstracts, SocINDEX
Business & Economics	Business Source Complete (EBSCO), EconLit, Emerald, FAME (Financial Analysis Made Easy), Economist Historical Archive, Factiva, Materials Business File (ProQuest), Mintel Reports
Education	Australian Education Index, British Education Index, CUREE (Centre for the Use of Research and Evidence in Education), Education Source, International Education Research Database, Teacher Reference Center (EBSCO), ERIC
Environment	Arctic & Antarctic Regions, Biosis Citation Index, CAB Abstracts, Environment Abstracts, ClimateWire, Environment Engineering Abstracts, Environment Index, Fish, Fisheries & Aquatic Biodiversity Worldwide (FFAB), GeoBase, GeoRef, GreenFILE, National Transportation Library, Natural Science Collection, Pollution Abstracts, Waters & Oceans Worldwide, Zoological Record
Human Resources	Croner-i Human Resources, HR Source (EBSCO), Human Resource Abstract (EBSCO), IDS Employment Law
Law	CANS (Citizens Advice Notes), HeinOnline, HUDOC, i-Law, JustisOne, Lawtel, LexisLibrary, Max Planck Encyclopedia of Public International Law, Oxford Law Trove, Oxford Scholarship Online (Law), Westlaw
Medicine & Health Care	Amadeo, APA PsycINFO, CINAHL, Clinical Trials (US National Institute of Health), Cochrane Library, EMBASE, HMIC (Health Management Information Consortium), MEDLINE, PubMed, Social Care Online
Multi-disciplinary	Academic Search Complete (EBSCO), JSTOR, ProQuest, ScienceDirect, Scopus, Web of Knowledge, Web of Science, ZETOC

(continued)

Table 6.9 (Continued)

Subject	External databases
Science & Engineering	ACM Digital Library, BioMed Central, Chemical Database Service, Cern Document Server, Ei Compendex, Computer and Information Systems Abstracts (ProQuest), Engineered Materials Abstracts, Environmental Engineering Abstracts, IEEE/IET Electronic Library, INSPEC, MathSciNet, NTIS (National Technical Information Service), ScienceDirect, Science Citation Index, SciFinder, Scitation, Scopus, Web of Science

Using a well-known search engine such as Google has two attractive advantages: it is free and easy to use. There is the additional advantage that up-to-date case studies can be readily accessed on the Internet. Disadvantages include the currency of the information that appears on your screen, i.e. is it relevant, reliable and recent? Databases recommended by a university department, on the other hand, have been chosen carefully to meet the needs of their students. As such, the currency of what is on offer is normally guaranteed, including ease of access.

Concluding your Literature Review

At the end of your Literature Review you want to be in a position where you have done the following:

1 Summarised your Literature Review findings (bullet-points are acceptable).
2 Highlighted emerging themes/issues.
3 Justified the need for your empirical study (if you intend doing one).

Appendix J (referred to earlier in this chapter) contains a sample conclusion for a Literature Review based on the e-Learning example used throughout this book. What might you wish to replicate from the sample conclusion when concluding your own Literature Review?

First, it summarises the findings from the Literature Review ('The study of relevant e-Learning literature . . .'). Your Literature Review might be quite large and complex, so by providing a summary you will help the reader to understand your work. A summary is also a useful aide-mémoire in that it ought to help you to stay focused and so avoid the potential for 'drift'.

Second, when you summarise your Literature Review findings, make sure that you emphasise what you consider to be the important points ('The review of literature stressed the need . . .'). You do not need to go over the arguments

again because that takes up valuable words: just point out what you found out in the literature *vis-à-vis* your research objectives. You are, in effect, summarising the content that appeared under each core subsection heading of your Literature Review. In this case, the drivers for e-Learning, barriers, and support for academic staff:

2 Literature Review
2.1 Introduction
2.2 Defining e-Learning
2.3 Forces Driving e-Learning in Higher Education
2.4 Barriers to Delivering e-Learning Programmes
2.5 Models/Frameworks to Support Academic Staff
2.6 Summary and Emerging Issues

Third, if your research involves the collection and analysis of empirical data, then you ought to explain, in your Literature Review conclusion, the necessity for such empirical research, e.g. perhaps the literature that you looked at expressed concern about the lack of empirical research in your field of study or perhaps current studies are incomplete in some way ('There is a continuing need for empirical data . . .').

Finally, make some sort of reference to your next chapter – Research Methods – so as to provide a link for the reader ('The next stage of this research will detail the research methods to be used . . .').

By providing a summary, highlighting main points, the need for empirical research (if you are implementing empirical research) and a link to the next chapter, the conclusion to your Literature Review ought to add to the quality of your dissertation.

Depending on the word-length of your dissertation, your summary may be shorter, or longer, than the sample summary given in Appendix J. If word count is an issue, feel free to conclude with a bullet-point summary. Here is a bullet-point version of the narrative summary in Appendix J. The bullet-point summary has a word-count of 248 words, as opposed to the 329 words in the narrative version in Appendix J, a saving of 81 words without loss of meaning:

The study of e-Learning literature revealed that:

- There was no agreed definition of e-Learning. One was produced in this dissertation, highlighting connectivity, support infrastructures, and flexibility of access and delivery.
- Strategic drivers included perceived reduced costs, access to global markets, and increased student numbers.
- Benefits to staff and students included flexibility of delivery and access, independent learning, and job opportunities.
- Barriers to e-Learning included staff resistance, student drop-out rates, student inability to cope with independent learning, opposition to globalisation, access to support facilities, inadequate student support

infrastructures and, crucially, lack of staff preparation to cope with e-Learning.

- Meaningful guidelines and models were identified as a necessary prerequisite to preparing academic staff for e-Learning environments.
- Guidelines and models, however, were mainly skeletal and general in nature with relatively little advice based on evidence-based research.
- There is a continuing need for empirical data on how academic staff are preparing for e-Learning, and the aforementioned review of literature supports this claim.

Empirical research will now be carried out to find out how academic staff are preparing for e-Learning in practice, what motivates them to do so, and, from a wider perspective, the drivers and barriers acting on the university environment in relation to developing e-Learning programmes. The next stage of this research will detail the Research Methods to be used to capture this data, including details on the research strategy, data collection techniques, sample selection, and management of the researcher's role.

Now is the time to introduce a variation on a Literature Review: a Contextual Review. Even if you know that you will be doing a Literature Review, read this section because it also hammers home the importance of linking your structure to your research objectives.

Contextual Review

The traditional Literature Review has its strengths: it is well established in academia as a form of research and it is particularly suited to those interested in reviewing scholarly books and articles as a prelude to collecting their own data using traditional research methods, e.g. a survey or a case study.

However, what if you are an art student, who wants to create a tapestry piece and write about what you have created, but before you do that you want to write about other tapestries, exhibitions that influenced you, as well as the development of materials and equipment related to your focus of study? In such a scenario, a traditional Literature Review may not meet your requirements.

If you want to write mainly about 'things' – such as sculptures or software programs or television programmes or photographs or plays in the theatre or films in the cinema or paintings or music – then you may prefer a Contextual Review over a Literature Review.

So, then, what is the difference between a Contextual Review and a Literature Review? A Contextual Review is a variation of a Literature Review but performs the same function. Both may make use of traditional academic sources such as scholarly books and journal articles. Both may discuss *things* such as photographs or buildings or artefacts or music or plays or computer

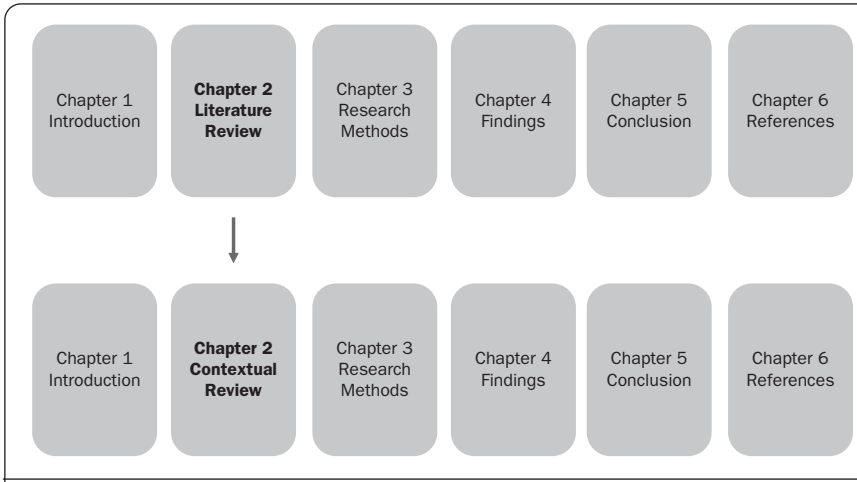


Figure 6.6 Dissertation structure with Contextual Review and practice-based research

software. The difference is in the weighting: if the focus of the theoretical part of your dissertation concentrates predominately on using traditional sources of academic information (books, articles, etc.), then you are better served with a Literature Review; if, on the other hand, your main focus is on discussing 'things' in themselves, such as software code or art pieces or acting or musical scores (as perhaps a precursor to creating your own 'thing'), even though you may also access some traditional literature, then you may find that a Contextual Review better describes that task.

The overall structure of your dissertation would remain the same, with the difference that where you had a Literature Review, you will now have a Contextual Review (Figure 6.6).

The chapter headings in Figure 6.6 are not carved in stone – you can rename them to fit in with your research topic. For example, you might decide upon a more descriptive title for your Chapter 2 Contextual Review, such as Chapter 2 Contextual Review: The Use of Music in Plays. Also remember that an abstract (summary) of your dissertation will precede Chapter 1 Introduction. Similarly, you might replace the rather bland title Chapter 4 Findings with Chapter 4 Analysis of New Musical Piece for *A Streetcar Named Desire*, if that is the thing that you eventually create and want to discuss.

Example 1 Computer Science: Software Development

Let's assume that you are a computer science student specialising in software development. For your dissertation you decide to improve a piece of freeware – publicly available software – designed to enhance Twitter access and usage. Before creating and testing your own contribution, you opt to place your proposed work in context via the mechanism of a Contextual Review

rather than the more traditional Literature Review, reasoning that you will be reviewing mainly non-traditional literature sources as well as 'things', e.g. software code and computer technologies.

As with a Literature Review, you will create a structure for your Contextual Review that reflects your specific research objectives, thus minimising the chances of student drift. For example, suppose you have three research objectives:

1 Clarify the role of freeware in software development.
2 Critically assess freeware designed for Twitter usage.
3 Develop and test prototype freeware to enhance Twitter usage.

A fourth objective could easily be added if so desired: Make recommendations on the way forward or highlight the implications for Twitter use. Objectives 1 and 2 above are intellectual activities based on a study of software code and other more traditional literature sources, such as reports and articles, and could be addressed in a Contextual Review (Objective 3 above is a practical activity and would follow after your research methods chapter). The structure of which could be as shown in Figure 6.7, once again following good practice to create subsections that clearly map onto stated research objectives.

Within your Contextual Review you will still need to replicate the scholarly activities exhibited in a traditional Literature Review. That is, you would still be expected to show evidence of higher-level cognitive skills. Yes, place your chosen software code/program in the context of other software developments and describe what each software does but also take the opportunity to go beyond mere description: critically evaluate that software, i.e. give your views on it, where it is deficient and how it could be improved. In other words, describe, quote, comment, and justify your comments.

Referencing will form the backbone of your review – it is, after all, a Master's dissertation. For in-text referencing you adopt the same approach as you

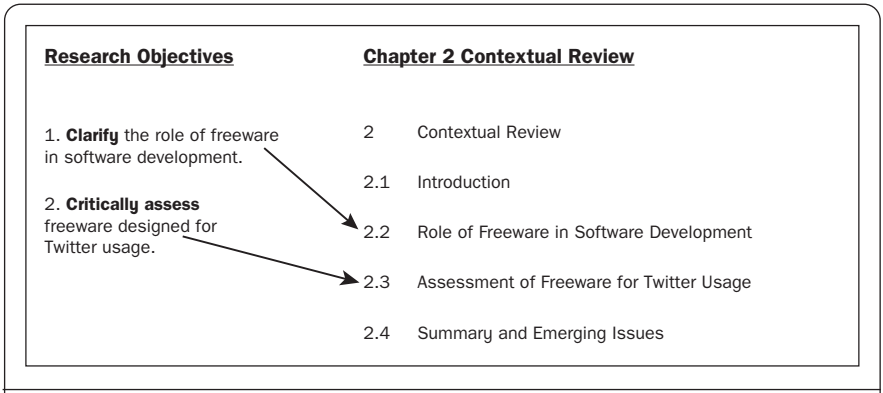


Figure 6.7 Contextual Review structure: example 1

would if completing a Literature Review. When referencing 'things' in your Contextual Review rather than traditional literature, you name the thing, its creator and, where known, year of creation. Here are some in-text referencing examples to highlight these points using Harvard:

- AVG anti-virus software (AVG Technologies, 2017) claims to provide fully loaded protection.
- Civilisation VI (Firaxis, 2016) is the latest version of a game that has maintained a loyal following since its inception in 1999.
- Newton is an android app by Cloudburst (2016) that allows users to access all their email addresses through one point of contact.

See Appendix F on how to create software-related entries in your reference list at the end of your dissertation.

Example 2 Art

In this example let's assume that you are a sculpture student at an Art School. You want to research the role of public sculpture in fostering Romantic nationalism. You decide that your dissertation will contain a theoretical element (a review of sculpture and its use in Romantic nationalism) and a practical element (the creation of a sculptural piece to reflect Romantic Scottish nationalism). Instead of a traditional Literature Review, you resolve to write a Contextual Review, on the basis that you will be primarily discussing things, in this case, sculptures, rather than focusing on traditional literature sources, although it is likely that you will also be referring to traditional literature sources in the form of art books and articles. You might have four research objectives:

1 Define the term 'Romantic nationalism'.
2 Review the historical role of sculpture in Romantic nationalism.
3 Create a piece of sculpture to reflect Romantic nationalism in Scotland.
4 Assess audience reaction to the sculpture piece in terms of Romantic nationalist feelings.

The structure of your Contextual Review might appear as shown in Figure 6.8, reflecting objectives 1 and 2.

Here are some examples of how to reference art work in-text in your Contextual Review (or Literature Review, if you so choose). Once again, you just need to remember to name the thing (in this case, an art work), its creator and, where known, year of creation. Basically, you *italicise* the name of the art work.

- Michelangelo's *David*, created between 1501 and 1504, is an excellent example of classical renaissance sculpture.
- The strange thing about Van Gogh's *Café Terrace at Night*, painted in 1888, is the absence of black in a night scene.

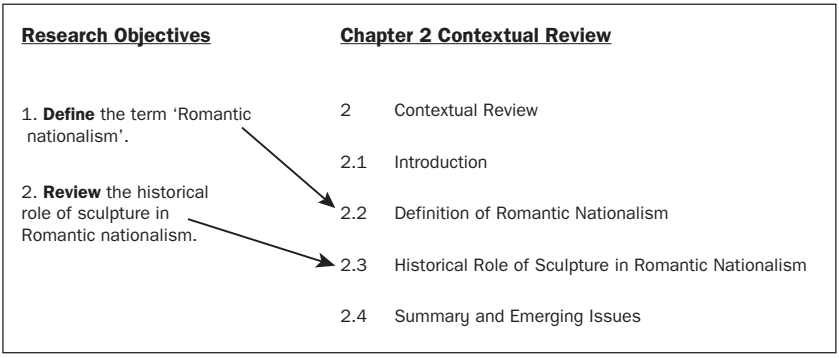


Figure 6.8 Contextual Review structure: example 2

See Appendix F on how to create entries for art works in your reference list at the end of your dissertation.

Example 3 Theatre Studies

In this example, let's assume that you are a student of theatre and that your topic of study is the use of music in plays. You decide that central to your dissertation will be (1) a review of the use of music in plays and (2) an empirical element wherein you intend to create an alternative piece of music for an established scene in a well-known play with a view to changing audience expectations and experience.

Once again you could, without any detriment to your dissertation, write a Literature Review to cover point (1) above. You choose instead to write a Contextual Review, reasoning that for the most part you will be reviewing musical compositions and the impact of music on audiences, although you will also be referring to plays as well articles and books about music in plays.

The structure of your Contextual Review will closely follow your research objectives. Let's suppose further that you have four research objectives:

1 Explain the impact of music on mood and atmosphere.
2 Critically explore the use of music in plays.
3 Create a musical piece for a seminal scene in a famous play to alter audience expectations and experience.
4 Assess audience response to the scene in research objective 3.

Objectives 1 and 2 will be addressed in the Contextual Review, the structure of which could be as shown in Figure 6.9, once again showing the relationship between research objectives and structure.

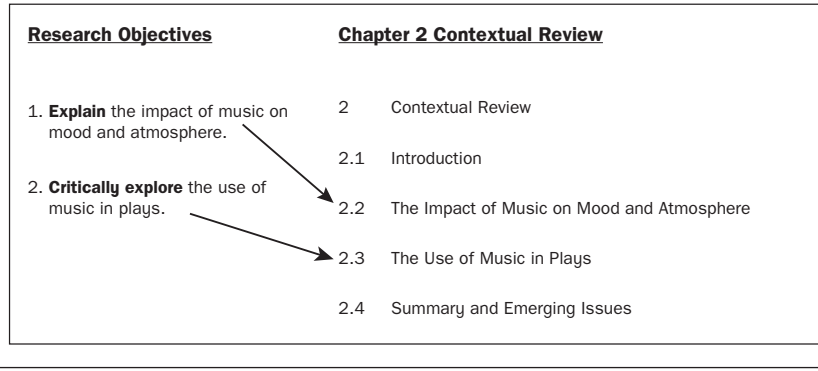


Figure 6.9 Contextual Review structure: example 3

Examples of in-text referencing in your Contextual Review:

- Led Zeppelin (1972) performed a perfect set to a packed Green's Playhouse.
- Tennessee Williams was very specific about the use of music in his plays, as evidenced in *A Streetcar Named Desire* (1947).

When referencing a particular line or scene in a play (book format), it is simpler to cite the specific location in-text as you would a book, e.g.:

- Beckett (2006, p. 1) immediately sets the enigmatic tone for the whole play when Estragon declares 'Nothing to be done'.

Alternatively, you can identify the location of the play in terms of act, scene and line number when you create your entry for your reference list (place it after publisher); but if you are discussing several scenes in your play, then that can become problematic as an entry in a reference list. Hence the simpler idea to cite the specifics as an in-text reference while keeping the reference entry in your reference list as simple as possible as per the general play format in Appendix F.

If you opt for a Contextual Review over a Literature Review, do not jettison the advice on how to write a Literature Review. On the contrary, the same advice holds. You will still need to structure your Contextual Review around your research objectives; you will still need to understand the difference between description and critical evaluation, with emphasis placed on producing evidence of the latter; you will still need to know how to reference, even though you will mainly reference objects such as computer programs or scenes from films or art works or plays or musical scores; you will still need to

appreciate that an understanding of Bloom's taxonomy of learning can help you target specific cognitive skills – knowledge, comprehension, application, analysis, synthesis, evaluation – to enhance your review; and you will still need to justify your own empirical creation.

You can, if you prefer, replace the term Contextual Review with the more generic, but shorter heading, Context. This approach is also seen in cases where students are completing their dissertation part-time but want to write about practice-based matters relevant to their own workplace, e.g. teachers and HR managers, where they place their research in context by outlining their own interests and the development of their focus of study, with reference to relevant theories. Such a chapter tends to have a more personal touch than a straightforward Literature Review, but when it comes to the review of relevant theories, the discussion is no less rigorous. Those involved in creating 'things' can also use the term Context rather than Contextual Review, if that is to their liking.

The next section provides a brief introduction to a type of review that is very different from either a Literature or a Contextual Review: a Systematic Review. It is worth reading even though you may not be doing one – not least because it may give you ideas that you had otherwise not considered and allow you to appreciate the different expectations placed on other students.

Systematic Review

The criticism of the traditional Literature Review is that the choice of literature to review is often left to the reviewer. If one is not careful, the input to review can be personal and the output debatable. Those dealing with health research require a more robust and reliable approach to reviewing literature because of the implications that any findings may have on, for example, patient care.

Systematic Reviews have been developed to meet that concern. They bring together literature from a variety of studies on the same topic and synthesise the results, either qualitatively or quantitatively. To achieve credibility, a Systematic Review must go through a formal process that includes the following:

1 The establishment of the review objective/question.
2 Details on how and where to search for literature.
3 Decisions, including justifications, on the literature to be included/excluded in/from the study.
4 Pooling together the results from each study to give, where applicable, an aggregate score or a summative view.
5 Placing the results in context (e.g. in terms of data heterogeneity, quality, likely bias, etc.).

The stages of a Systematic Review are now discussed, starting with the review question.

Stage 1: Determine the review objective/question

A Systematic Review needs to be transparent and well documented. The first opportunity to show such openness and attention to detail occurs when defining *the purpose of the systematic review*, i.e. the review objective. This can appear in the form of a *statement* or as a *question*. Example of a research objective as statement:

> To assess the clinical effectiveness of Remdesivir for the elderly hospitalised with severe Covid-19.

A Systematic Review may have more than one objective. Example:

1 To investigate the patient characteristics that impact on exercise therapy.
2 To assess the clinical effectiveness of exercise therapy on patients with peripheral arterial disease.

A review may have one broad aim and quite a number of sub-objectives. For instance, a broad objective could be 'to assess the effects of water fluoridation on bone strength'. This, in turn, could be refined into more manageable and achievable individual objectives:

1 Are there differences in the effects of natural and artificial water fluoridation?
2 Does fluoridation have positive effects?
3 If so, what are those positive effects?
4 Does fluoridation have negative effects?
5 If so, what are those negative effects?

As you can see from the above, review objectives can also be turned into questions. PICO is a protocol developed by Richardson *et al.* (1995) specifically to aid healthcare researchers in framing research statement(s)/question(s). PICO stands for the *Patient group*, the *Intervention*, the *Comparison (or Control) intervention* and the *Outcome*. A structured approach to applying PICO is to ask yourself the questions posed in Table 6.10. The main benefit of applying PICO is that it forces you to concentrate on those components you consider central to your research.

Table 6.10 Applying PICO

Question	Example
1 What is your **P**atient group/setting?	The elderly hospitalised with severe Covid-19
2 What is the **I**ntervention under question?	Use of Remdesivir
3 **C**ompared to what?	A placebo
4 What **O**utcome is being tested?	Improvement in clinical status

Stage 2: The literature search process

Let's assume that you have applied PICO to produce one research question. You now need to reflect on *where* to look for studies that will allow you to answer your review question. You are required to identify the sources, which can be a mix of online databases, books, articles, and ongoing trials. The studies in the literature may use different types of evidence, from randomised control trials (RCTs) to case studies.

Where can you look for studies to be included in your review? Popular databases and resources include CEBM (Centre for Evidence-Based Medicine), JBI Evidence Synthesis, PubMed, The Cochrane Library, MEDLINE, SCOPUS and Web of Science.

Try to keep an open mind in your search for literature and avoid just sticking to pet journals, well-known researchers or Western-based publications. If you tread the usual publication paths, then from the outset you may unwittingly fall into the trap of introducing different types of bias into your Systematic Review, such as *language bias* (favouring English publications), *publication bias* (favouring particular publications) and *selection bias* (favouring particular researchers).

Do not concentrate exclusively on *published* sources. You should try and seek out *grey literature*, i.e. those studies that have not been formally published in peer-reviewed forums. Grey literature covers working papers, government reports, institutional documents, market surveys, conference proceedings, technical papers, and works-in-progress (e.g. PhD studies). There are two websites on grey literature that you might find useful: Copac and GreyNet.

Stage 3: What literature was selected (and why)?

Initially, your search should be comprehensive and so pick up any study that relates to your research question. If you start excluding studies right away, you may be guilty of selection bias. Wait until you have what appears to be a comprehensive list of studies that look as if they meet your criteria and then, and only then, apply a methodological approach to whittle down your list to those studies that definitely meet your eligibility criteria. This ought to be an objective selection process and not one based on personal or political bias.

Here is a methodical approach to assist you in deciding which studies to include and which to exclude:

1 Does the study meet each of the elements in your review question? It does not matter how eminent the authors of the study are or how brilliant the work is: if it does not contribute to answering your review question, then it has no part to play in your review. Keep a note of the studies that you reject and the reasons for your decision (this helps you to counteract claims of bias for excluding certain literature).
2 Is the study methodologically sound? If it is not, then do not include the study in your review. A study is methodologically suspect if the methodology used is not clearly stated in the literature, from the initial research

question (including component parts) to the data collection and analysis techniques. One way to determine if this is the case is to ask the question: 'Is the study repeatable?' If the answer is no, then that suggests that the authors have not clearly identified how they carried out their study.

3 Related to methodology, you need to decide on the type of evidence acceptable to you. Do you accept only RCTs? Will you accept non-randomised controlled trials? If so, you need to recognise their limitations and take care when using the results of such a study. You need to be clear about which studies you reject, e.g. studies of poor methodological quality.

4 Are you looking for studies based on quantitative or qualitative data? Try and avoid mixing and matching studies that use different types of data (e.g. qualitative case studies with RCT experimental studies) because it is difficult to pool studies that use different data types.

5 Who paid for the study? This may seem an irrelevant question, particularly if the study meets your PICO-derived objective and is methodologically rigorous. However, the study may be biased, although not necessarily so, if it was financed by a third party with a vested interest in the results.

In your dissertation make a clear statement of your selection criteria, together with the actual literature that met the selection criteria, as well as examples of literature that was not included (and the reasons why not).

Stage 4: Pool studies

Once you have reduced the number of studies to those that meet your selection criteria, then you can attempt to pool the results of the independent but interrelated studies together to form a position on either the effectiveness of a particular intervention or the feasibility of such an intervention or even the appropriateness of such an intervention. This is referred to as synthesising your evidence, or the *evidence-synthesis* stage.

Pooling the results from different studies is easier said than done. In the first place, if the results of one study were based on *quantitative* RCT data and another study was derived through *qualitative* observational studies, then it would be inappropriate and potentially misleading to combine the results to form an aggregate 'score'.

The type of data that you are dealing with determines how you will collate the results from the different studies. If the data from each of the studies is qualitative, then you will engage in *meta-synthesis*. Meta-synthesis is similar to critical evaluation in a literature review but with the added bonus that the studies that you are reviewing have been meticulously selected to meet a peer-reviewed protocol.

If the data from each of the studies is quantitative, then you will use either *meta-analysis* or *narrative* summaries. Use meta-analysis when the quantitative data is homogeneous, i.e. from the same population, applying the same inclusion criteria and using the same methodological design. Meta-analysis involves the use of traditional statistical techniques to arrive at an aggregate score.

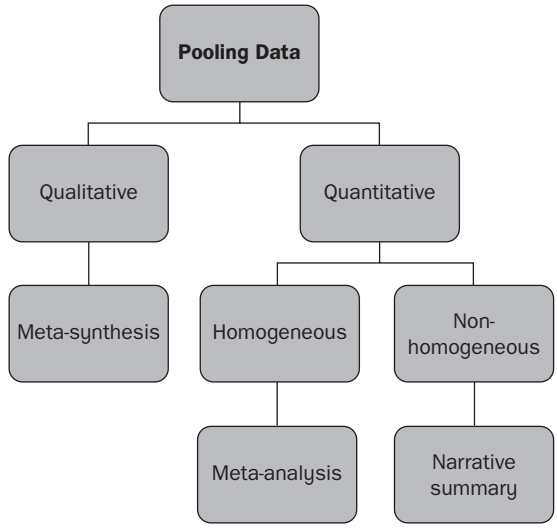


Figure 6.10 Pooling the data: synthesising the evidence

Use narrative summaries if the quantitative data is non-homogeneous, i.e. from different population groups and/or has different inclusion criteria and/or uses different methodologies. It is a delicate and difficult task to pool non-homogeneous data together to produce a single statistical score that can be relied upon. In such a situation, a narrative summary is normally employed: this is a discussion about the strength of evidence on the topic under discussion with respect to intervention, feasibility or appropriateness.

So, a narrative summary is similar to meta-synthesis, but the former relates to non-homogeneous quantitative studies and the latter to qualitative studies. Figure 6.10 summarises the evidence-synthesis process.

Stage 5: Place findings in context

It is in this final stage of the systematic review where you do the following:

1 Interpret your synthesised results in the context of the initial review question.
2 Identify any limitations of your review.
3 Point out the practical implications of your findings.

If you are confident that you have a clear answer, one way or the other, to your initial review question, then say so: for instance, either a treatment works or it does not, or an intervention is appropriate or it is inappropriate. On the other hand, if the evidence from your pooled studies is inconclusive, then you must also say so.

All studies have limitations. Be upfront about the limitations of your work and recognise and resist the dangers of exaggerating the strength and impact of your findings. For example, perhaps the data used is non-homogeneous or you depended too much on observational studies or you ignored grey literature or focused on studies published from one source. Identifying any defects in your study will help the reader make a more informed view on the value of your work.

Lastly, what are the practical implications of your work? Will it impact on patient care? Will it have an impact on healthcare policy and practice? Does it point to a new focus of research? Identify the practical implications, if any, of your work.

Checklist

The Literature Review

1 Structured Literature Review to reflect research objectives ✔
2 *Coherence* achieved using relevant and logical headings and subheadings ✔
3 *Cohesion* achieved by linking themes and using linking words ✔
4 Careful choice of academic language ✔
5 Evidence of critical evaluation ✔
6 Sources *relevant*, *reliable*, and *recent* ✔
7 Succinct summary linking to research methods ✔
8 If Contextual Review, followed steps 1–7 ✔
9 If Systematic Review, adhered to accepted protocols ✔

References

Anderson, L. W. and Krathwohl, D. R. (2001) *A taxonomy for learning, teaching and assessment: a revision of Bloom's taxonomy of educational objectives*. New York: Longman.

Bloom, B. S. (ed.) (1956) *Taxonomy of educational objectives: the classification of educational goals handbook 1: cognitive domain*. New York: McKay.

Richardson, W. S., Wilson, M. C., Nishikawa, J. and Hayward, R. S. (1995) 'The well-built clinical question: a key to evidence-based decisions', *ACP Journal Club*, 123(3), A12-A13.

Further reading

Boland, A., Cherry, G. and Dickson, R. (2017) *Doing a systematic review: a student's guide*. London: Sage.

Cottrell, S. (2017) *Critical thinking skills*: *effective analysis, argument and reflection*. 3rd edn. Basingstoke: Red Globe Press.

Hart, C. (2018) *Doing a literature review: releasing the research imagination*. 2nd edn. London: Sage.

Markey, K. (2019) *Online searching: a guide to finding quality information efficiently and effectively*. 2nd edn. London: Rowman & Littlefield.
Mewburn, I., Firth, K. and Lehmann, S. (2018) *How to fix your academic writing trouble: a practice guide*. London: Open University Press.

Summary of key points

- A good Literature Review should focus on your research objectives, display spread and depth to your reading, and show evidence of *critical evaluation*.
- To avoid '*student drift*', create subheadings that link explicitly to your research objectives.
- *Coherence* refers to the logical presentation of ideas and is largely achieved through the creation of an appropriate structure. *Cohesion* refers to how well your dissertation knits together, which is helped by linking themes and making use of linking words.
- Write a *brief introduction* to your Literature Review that reminds the reader of your research objectives, the topics that you will cover, and how they relate to those research objectives.
- *Describing* the work of others is a basic undergraduate skill. Master's students are expected to go beyond mere description and engage in *critical evaluation*. Critical evaluation = description (of something) + your views (on that 'something') + reasons for holding your views.
- *Learning* involves the development of cognitive skills (mental skills), affective skills (feelings, emotions) and psychomotor skills (physical skills).
- To achieve good marks, you need to exhibit *higher-level cognitive skills*: *analysis*, *synthesis* and *evaluation* (in Bloom's taxonomy of learning) or *analysing*, *evaluating* and *creating* (in Anderson and Krathwohl's updated model).
- The *conclusion* to your Literature Review should summarise your main findings, highlight emerging issues, and provide a link to your Research Methods chapter.
- *Literature search skills*. Select your topic, define your terms, set boundaries, select appropriate sources and analyse those sources. Your selected literature should be *relevant*, *reliable* and *recent*. University library databases therefore ought to be your first port of call.
- A *Contextual Review* is an alternative to a Literature Review, intended for those students writing *mainly* about 'things', such as software or art works or theatre studies, rather than traditional literature sources (books, articles, etc.).
- The *academic skills and knowledge* required to complete a Contextual Review are the same as those required to complete a Literature Review.
- A *Systematic Review* is a highly focused and disciplined approach to reviewing literature using predetermined and accepted protocols.

Chapter 7



Research methods

• What's it all about? • Research strategy • Data collection • Data analysis • Limitations and potential hurdles • Artist as researcher • Checklist • Further reading • Summary of key points

If you are collecting your own data, then you will need to explain your research methods. The focus will be on how to write your chapter on research methods. Different research methods will be summarised but if you want more detail on the research methods themselves, then see the Further Reading referred to in this chapter or consult your dissertation handbook. Most students will adopt traditional research strategies (case studies, surveys, etc.) and well-established data collection techniques (questionnaires, interviews, etc.) but advice will also be given to student 'artists' – in the widest meaning of the word – who intend creating something, such as a sculpture or a play or a piece of music, or even a computer program.

What's it all about?

What is the point of a chapter on research methods? If you intend collecting your own data, i.e. implementing your own empirical research, then you will need to tell the reader how you intend carrying out that research, typically in a chapter headed Research Methods. You should write your Research Methods chapter as if you are giving step-by-step instructions to others who know nothing about research and that, if they so wished to, they could repeat your research without the need to call you up for advice.

Two key questions that your chapter on research methods should answer are: *what* are your chosen research methods and *why* have you chosen them?

It is the combination of answering the *what* and *why* questions – i.e. what you intend doing and why – that leads to high marks.

> **! A common mistake**
>
> When students do poorly on the chapter on research methods, it is because they have not answered the *what* and *why* questions. For instance, they have provided little detail, e.g. why they considered their case study appropriate, who their research subjects were, and if research questions were asked, what questions were asked, why those questions, and how they analysed their data.

The structure of your chapter on research methods reflects the methods that you will describe to your reader. What are these research methods? The first one is your research *strategy*. This refers to the main means by which you intend to carry out your research (which, in turn, depends on the nature of your research objective/question). For example, if you are interested in exploratory research, you might implement a case study; or if you are interested in generalising your findings about a particular population, you might opt for a survey. The next research method to consider is how you will collect your data, e.g. observation, interviews, questionnaires, etc. Then you will need to provide details of the method you will use to analyse your collected data, e.g. statistical analysis, textual analysis, interpretative analysis by theme, etc. If, following good practice, you add a brief introduction, then your structure starts to take shape:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
- 3.3 Data Collection
- 3.4 Data Analysis

To complete your structure, you should include information on the limitations of your research and any potential hurdles that you might encounter. Every research project has limitations. No research can do everything. Recognising the limitations of your work, without devaluing the importance of your work, is what good researchers do. It allows other researchers to pick up where you left off and to fill the gaps. There may be practical issues that you need to surmount, e.g. access to research subjects (they may be busy); or if you are interviewing colleagues, how to get them to see you as a researcher. The updated structure will be:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy

3.3 Data Collection
3.4 Data Analysis
3.5 Limitations and Potential Hurdles

Appendix M contains a sample dissertation Research Methods chapter. Yours may be shorter, or longer, depending on how many words that you have to play with and what you want to say. It begins with a brief introduction. Note that the brief introduction shows good cohesion by linking back to the Literature Review and by reminding the reader of the research objective that the chapter particularly relates to. It then identifies the topics to be covered, the value of collecting this empirical data and, indeed, the benefit of the chapter. Read the introduction now. The heading 'INTRODUCTION' is optional.

You will now learn about the core parts of this structure – *Research Strategy*, *Data Collection*, *Data Analysis*, and *Limitations* – starting with your research strategy.

Research strategy

Structure and content

A research strategy identifies the type of research you have selected to do. Table 7.1 lists some of the more established strategies from which you can choose. See Appendix N for a brief description of each of these research approaches.

Your research strategy is only one of the *methods* that you will be using to carry out your practical research: the other methods, which you also have to discuss in your dissertation, include your data collection *method(s)* and also the *method* by which you expect to analyse your collected data. That is why this chapter in your dissertation is usually called the Research Methods chapter, to reflect the fact that you will be writing about a number of methods related to implementing your empirical research (research strategy, data collection techniques, data analysis framework, etc.).

It is important to emphasise that you do not start writing the subsection Research Strategy until you know which research strategy you will be using. What you ought to do is to consider your main research questions/objectives and then reflect on which research strategy best meets your needs. In short, a *survey* is used when you are seeking representative views; an *experimental* strategy is required when you are interested in causal relationships; *historical* research for events that occurred in the past; a *case study* when you seek an

Table 7.1 Common research strategies

Action research	Case study	Ethnographic research	Experimental research
Grounded theory	Historical research	Mixed methods	Survey

in-depth, investigative study; and so on. For example, Research Objective 3 in the sample chapter in Appendix M sets out to:

> Explore staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.

It is easy to argue that a case study is an excellent match for this objective because a case study is about exploratory, in-depth research and a study of academic staff views in one university will help meet that objective.

Once you have selected a research strategy that fits in with what you want to do, then, and only then, can you turn to the business of writing about it. In this subsection you need to do three things with your chosen research strategy:

1 Identify it.
2 Describe it.
3 Justify it.

Accordingly, the logical shape of this subsection in your research methods chapter should kickstart by identifying your choice of research strategy:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
  The research strategy used in this research is [enter chosen research strategy]
- 3.3 Data Collection
- 3.4 Data Analysis
- 3.5 Limitations and Potential Hurdles

Next, you need to describe your chosen strategic method. You do that to show your marker that you know what a case study or survey or action research, etc. is, and you can do that in one of two ways: either by providing a simple description in your own words (citing sources for support where appropriate) or by quoting someone else's (brief) description and interpreting that quotation for the reader. Let's suppose that you have picked a case study as the means by which you will conduct your research. Your structure will build up as follows:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
  The research strategy used in this research is [enter chosen research strategy]
  A case study is . . .
- 3.3 Data Collection
- 3.4 Data Analysis
- 3.5 Limitations and Potential Hurdles

That answers the *what* question, i.e. what research strategy you will be using and what it is. Lastly, you still need to answer the *why* question: why that research strategy? You need to explain why that strategy best suits what you want to do, i.e. why it is appropriate for your research. Your narrative is now becoming very coherent:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
  - The research strategy used in this research is [enter chosen research strategy]
  - A case study is . . .
  - **A case study best meets the needs of this research because . . .**
- 3.3 Data Collection
- 3.4 Data Analysis
- 3.5 Limitations and Potential Hurdles

Note the above text is merely emphasising the logical flow of your narrative – the different parts of that narrative may form paragraphs in their own right.

> **! A common mistake**
>
> A common mistake by students is to spend the bulk of their time discussing research strategies in general, with scant attention given to the one that they have chosen and, crucially, why.

Let's go through the Research Strategy in the sample chapter on Research Methods to check that it covers the three bases above. That is: (1) it pinpoints the research strategy to be used; (2) it describes what that strategy is to the reader; and (3) it justifies the choice of that strategy. Too many students focus on (2) and fail to address (3). That is a mistake because justifying the appropriateness of your strategy lifts your marks from the mediocre to the meritorious.

Read the Research Strategy subsection in Appendix M now.

Although the sources cited are dated (it is from an old student piece), we can see that the content is good: the research strategy is *identified*, *described*, and *justified*. Where you see **[i]**, **[d]** and **[j]** in the discussion below, **[i]** refers to text that **i**dentifies the research strategy adopted, **[d]** refers to text that **d**escribes that strategy, and **[j]** refers to text that **j**ustifies why that strategy was chosen.

The student **[i]** immediately identifies the research strategy that will be used – a case study – and **[d]** makes use of a quotation to describe what a case study is:

> **[i]** The research strategy that will be used to implement the empirical research is a case study. What is a case study approach and why is it

suitable for this research? **[d]** Cohen and Manion (1995, p. 106) describe a case study thus:

> the case study researcher typically observes the characteristics of an individual unit – a child, a class, a school or a community. The purpose of such observation is to probe deeply and to analyse intensively the multifarious phenomena that constitute the life cycle of the unit.

The student then **[d]** interprets the quotation and goes on to **[j]** explain how the criteria for a case a study meet the research objective:

> **[d]** According to this definition, a case study is therefore concerned with close observation of how a particular population group in a particular setting behave in a particular context. **[c]** These criteria perfectly meet the needs of this research. In the first instance, the 'individual unit' under study is one university. Second, the 'multifarious phenomena' in question focus on staff views and practices on e-Learning preparation. Third, the purpose of research objective 3 is to 'explore' these views and practices or, in Cohen and Manion's words, to 'probe deeply'.

Next, the student introduces another source that **[d]** defines a case study differently:

> However, there is some disagreement about what constitutes a case study. **[d]** Yin (2003, p. 13), for example, defines a case study in a different way:
>
> A case study is an empirical inquiry that
> - Investigates a contemporary phenomenon within its real-life context, especially when
> - The boundaries between phenomenon and context are not clearly evident.

Then, even with the different emphasis placed on what constitutes a case study by that source, the student once again **[d]** interprets and **[j]** justifies why a case study is still tailor-made for this research work:

> **[j]** Does this empirical research meet Yin's two-pronged definition of a case study? With reference to his first condition – *Investigates a contemporary phenomenon within its real-life context* – e-Learning is a contemporary issue, as evidenced in the Literature Review. The study will also take place in a 'real-life context', in this case, a university.
>
> **[j]** In terms of Yin's second criterion – that the *boundaries between phenomenon and context are not clearly evident* – it is difficult to compartmentalise e-Learning and learning in a higher education institution and to know when one begins and the other ends, particularly, as the review of

> literature showed, when there is confusion over what is meant by the term e-Learning.

The student has successfully (1) identified the chosen research strategy; (2) described it (through use of quotes and interpretation of those quotes); and (3) justified the chosen research strategy, not once, but twice. The student could have stopped there but, with one eye on marks for evidence of critical evaluation, decides to offer a viewpoint on why the second source defined a case study differently:

> Although this research meets Yin's second condition – *the boundaries between phenomenon and context are not clearly evident* – it seems likely that Yin's second condition has more to do with emphasising the interpretative/constructivism view of the world than insisting that complexity of environment is a necessary condition that needs to be satisfied to justify the use of a case study as a research strategy. In any case, the university environment is a complex environment and one that encompasses different stakeholder perspectives and interest groups.

For good measure, the student then summarises why a case study is a suitable research strategy for this research:

> The facets of case study strategy, regardless of nuances in definition, match the aim of objective 3 of this research . . .

Lastly, the student **[j]** gives another reason for carrying out a case study: to compare theory with practice.

> This research is also interested in comparing what was discovered in the Literature Review with the results of a case study. Saunders *et al.* (2000, p. 92) believe that a case study approach meets that objective: 'we would argue that case study [sic] can be a very worthwhile way of exploring existing theory and also provide a source of new hypotheses'. Although the intended output of this research is not a set of 'new hypotheses', it is nevertheless worthwhile in that existing theory will be compared against the behaviour of one institution and, as a result, an improved understanding – rather than 'new hypotheses' – will be developed to aid universities in their quest to prepare academic staff for e-Learning.

Essentially, what you have to remember is that you need to *define your chosen strategy and justify why it meets your research needs*. As long as you do that, then your marker will see that you understand the strategy that you have picked and, importantly, why you have picked it (once again, it is the *what* and *why* questions that you focus on in your chapter on research methods). Try and refer to literature when laying bare your reasoning: this demonstrates that you are well-read and allows you another opportunity to exhibit your

skills in critical evaluation. Of course, the length of your answer will depend on the type of dissertation that you are doing and the number of words that you have to play with.

Before discussing the next subsection of your Research Methods chapter – Data Collection – it is time to bring to your attention two topics that can cause some confusion with students: *quantitative vs qualitative research*; and *positivism and phenomenology*.

Quantitative vs qualitative research

Quantitative research refers to research that is concerned with numbers and measurements, such as the number of people who smoke in a given period on 5th Avenue in New York or the proportion of a population that use a particular type of transport to get to work in Bombay. The number crunching can be more complicated than just gaining simple quantitative information. For example, it can include calculating the probability of dying before retirement for those in a given profession.

Qualitative research, on the other hand, is linked with in-depth exploratory studies of human behaviour in a natural setting. It attempts to answer *why* questions, where the opportunity for 'quality' responses exists. An example of qualitative research could be a study into why some employees go on strike and others don't. In general, quantitative research answers the *how* questions, whereas the *why* questions are left to qualitative research.

Does your research strategy dictate whether or not your research is quantitative or qualitative research? If, for example, you choose an experiment as your research strategy, or a survey for that matter, does that mean that your research will be quantitative research? On the other hand, if you choose a case study as your research strategy, would you then be justified in labelling your research as qualitative research? Let's try to get an answer to these questions by looking at an example.

Suppose that you decide to do a case study of one university in Paris (e.g. the Sorbonne). A case study is normally associated with an in-depth exploratory study, so a case study of one university in Paris must be a qualitative study, yes? Well, not necessarily. If your case study was intended to determine issues surrounding pass rates, such as the number of students passing each module, the progression rates for different courses and years, the number of resits, the assessment tools, and the hours that students spent studying per module, and you used closed questionnaires to capture this data, then the nature of this research would be quantitative in nature because the research objectives relate mainly to *how* questions (*how* many students passed each module, etc.) and because closed questionnaires limit the opportunity for in-depth exploratory responses.

On the other hand, you could implement a survey of universities in France, but instead of focusing on how many students failed modules, etc., you could focus on *why* students are failing, and collect your data through interviews. The 'why' nature of the research and the use of interviews – where the opportunity

to explore matters in depth exists – provide evidence that the research would now be primarily qualitative in nature.

Clearly, it is not the research strategy – case study, survey, experimental, action research, etc. – that determines whether or not your empirical study is quantitative or qualitative in nature: it is the combination of your research objectives + your research strategy + your data collection methods.

> **! A common mistake**
>
> A common mistake by students is to assume that it is the research strategy that dictates whether or not their research is quantitative research or qualitative research. Although it is generally true that a case study, for example, *suggests* a qualitative study and that a survey, for example, *suggests* a quantitative piece of research, it is not necessarily the case. The label 'quantitative' or 'qualitative' research is determined by the combination of your research questions, research strategy, and data collection methods.

Do not exclude the possibility that your research is both quantitative and qualitative in nature but leans towards one more than the other. For example, you might be interested in basic quantitative issues such as the number of shoppers in a particular supermarket in a particular time-frame, including their age and sex, but are mainly interested in finding out why they shop in that supermarket.

In any event, do not write in your dissertation that you are doing quantitative or qualitative research, or a mix, based *solely* on the research strategy that you have chosen.

Positivism and phenomenology

There are occasions when students substitute the philosophical terms *positivism* for quantitative research and *interpretivism* or *phenomenology* for qualitative research without grasping the meaning of these new terms. If you do not understand what these terms mean, then why use them? If you are not sure about research terminology, ask your supervisor. It is better to show your ignorance during the process of writing your dissertation than at the end, after you have submitted: in the former you only lose virtual marks, whereas in the latter you lose real marks.

Nevertheless, some explanation will be provided here of the terms *positivism* and *interpretivism/phenomenology*, just in case you feel the need to use them in your dissertation. A researcher with a *positivist* view of the world is someone who holds that reality is objective and independent of the observer and so can be measured and predicted. Measuring the temperature at which different types of metals melt could fall into the category of positivist research (since the melting metal is not influenced by human observation).

What the positivist researcher is really saying is that their type of research – positivist research – is not influenced by the unpredictable behaviour of human beings and that, as a result, their findings are more reliable (e.g. such-and-such a metal melts at such-and-such a temperature, full stop). Positivist research is common in the world of science (mathematics, physics, chemistry, etc.) and less prevalent in the arts-based research world (e.g. sociology, history, history of art, etc.), where the latter normally involves, and is influenced by, human participation and observation.

The emphasis on quantifiable data is the reason that positivist research is equated with quantitative research, but the two concepts, although similar, are not exactly the same. For example, providing students with questionnaires to complete, with a view to obtaining quantifiable data, is an example of quantitative research, but is not an example of *positivist* research, because the questionnaire responses are dependent on human participation, and therefore human influence.

Interpretative researchers, on the other hand, have a very different view of the world. Interpretative researchers believe that there are many, equally valid, interpretations of reality, and that, further, these interpretations are dependent on when they are made and the context in which they are made, i.e. they are *time-* and *context-dependent*.

If your research concentrated on, say, interviewing your fellow students on their views of dissertation supervisors, then you would be engaging in interpretative research: your research subjects would present a variety of views, some praising supervisors, others offering criticism, with a range of views expressed on why they like/dislike their supervisor. The emphasis on human interpretations of events leads interpretative research to be identified, correctly, with qualitative research.

Phenomenological research is just a fancy word for interpretative research, i.e. the focus on individual perceptions of events. Phenomenology has strong philosophical foundations, where the phenomenological philosophers, just like their phenomenological research cousins, are interested in how the world appears to others, i.e. in subjective experiences.

One could argue that the positivist researcher's view of their research – that it is untainted by human influence and so more reliable – is erroneous and just wishful thinking. In the first place, positivist researchers are often wrong. Scientists once thought that the world was flat. That the Sun rotated around the Earth. Aeroplanes continue to crash. Missiles go astray. Economic forecasting, based on quantitative modelling, is often wrong, and so on. There is also the argument that even in the world of positivist research, human influence cannot be avoided. Once measurements have been taken, and results produced, the results themselves require human interpretation. Scientists often disagree about how to interpret the same research data (e.g. global warming, distances between humans to prevent the spread of a virus, and so on).

That is not to say that interpretative research is any more reliable, or somehow 'better' than positivist research. Both types are useful, and have their place; and both types are fallible, because humans are fallible.

Data collection

By this stage you should know about the type of data that you want to collect. The brief introduction to your chapter on Research Methods, reference to the specific research objective that mentions the collection of empirical data, and the discussion surrounding your research strategy, should all have made that abundantly clear. In the example dissertation topic on e-Learning discussed throughout this book, the data sought focused on how to prepare staff for e-Learning, including drivers and barriers.

This subsection now concentrates on the collection of that data. Once the data collection methods (e.g. questionnaires, interviews, observation, documents, etc.) have been identified, then the specific questions or ways to get that data can be given.

Structure and content

Now that you know how to write a brief introduction to your Research Methods chapter, and how to write about your Research Strategy, the next step is to complete the subsection on Data Collection:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
- **3.3 Data Collection**
- 3.4 Data Analysis
- 3.5 Limitations and Potential Hurdles

You can divide the task into two parts, each in the form of a question to be answered:

1 Where will you get your data from?
2 How will you collect your data?

You also need to justify each of your choices in 1 and 2. In terms of your marks, you will get basic pass marks for stating where you will get your data from and how you will collect the data – justifying the choices made in each of 1 and 2 will get you higher marks.

Suppose that you picked a survey as your research strategy to get the views of football fans about their match-day experience. Suppose further that you plan to carry out your survey outside Liverpool football ground after a home game and that you would use pre-prepared questionnaires that you would read out to selected football fans. The logical flow of your Data Collection chapter could appear as follows. For illustrative purposes we shall put informal headings to indicate when part 1 and part 2 are being addressed. These headings would not appear in your final chapter.

Part 1: Where will you get your data from?

- The football ground chosen is Liverpool Football Club's ground, Anfield.

Brief background information about LFC and Anfield.

Rationale: Anfield was chosen because . . .

- The research takes place on . . .

Rationale: The timing makes sense because . . .

- X number of fans will be sampled . . .

Rationale: This number meets the aim of this research to . . .

- The sampling technique to be used to select fans is . . .

Rationale: This sampling technique is appropriate because . . .

Summary text/diagram

Part 2: How will you collect your data?

- Questionnaires will be used to collect data.

Rationale: Questionnaires are appropriate because . . .

- The questions to be asked are . . . (see Appendix X)

Rationale: These questions meet (or contribute towards) research objective X, in that . . .

Summary text/diagram

Note that if your research involves sampling, then you also need to identify the sampling technique to be used and justify the reason for choosing that sampling technique. Appendix O contains a brief summary of sampling techniques available to you. For detailed information on using basic statistics in research, including sampling, see Further Reading at the end of this chapter.

The content of part 1 – where you get your data from – can be further broken down as follows, with point 3 referring to sampling:

Where will you get your data from?

1 Identify where you will implement your research strategy.
2 Clarify from whom (or what) you will get your data.
3 Explain how you selected your research subjects.
4 Justify each of 1, 2 and 3.

Similarly, the content of part 2 – how you will collect your data – can also be broken down:

How will you collect your data?

1 Identify the data collection method(s) you will use (e.g. questionnaires, interviews, etc.).
2 If more than one data collection method is to be used, then state how.
3 Justify each of 1 and 2.

> **! A common mistake**
>
> A common mistake by students is to spend too much time describing data collection methods and not enough, if any, time on justifying their choices, thereby throwing away good marks.

Where will you get your data from?

Let's go through the Sample Research Methods chapter in Appendix M, starting with the source of the student's data. The heading '**Where will you get your data from?**' is a temporary measure to aid focus and doesn't actually appear in the final student script. Likewise, the other heading '**How will you collect your data?**' is there for temporary guidance and will not appear in the final dissertation chapter on your research methods.

Read the subsection entitled '**Where will you get your data from?**' now. The sample subsection is slightly wordy but here's what's good about that sample subsection. For emphasis, **[w]** will indicate *where* data will come from and **[j]** when that choice has been *justified*:

- **[w]** The student immediately identifies the site: Inverclyde University (IU): *The case study site will be Inverclyde University.*
- In the same paragraph, some background about IU is given.
- **[j]** In the second paragraph, the student then justifies the choice of that site with reference to literature: *The Commission of the European Communities (2002, p. 5)* . . .
- **[j]** The student explains why, even though it is a case study, doing a study of the whole of IU is not feasible: *This case study is not intended to be an exhaustive study of all the e-Learning initiatives operating in Inverclyde University* . . .
- **[w]** In the next paragraph, the student states that a postgraduate programme that will form the focus of the study (*Instead one postgraduate study programme* . . .) and also **[j]** justifies that choice, once again with reference to literature (*In a report* . . .).
- **[w]** The student then identifies the actual postgraduate programme and the number of academic staff that will form the basis of the study (*The postgraduate programme will be from a division . . . Specifically, eight*

academic staff . . .) and then offers justification **[j]** (*This will allow a focused . . .).*

- **[w + j]** *Elite* staff – staff with influence on the direction of e-Learning and staff preparation for e-Learning – are identified and the rationale for their inclusion in the study is given: *To gain a wider perspective . . .*
- The case study information is summarised in text form (*In summary, empirical data will be obtained from academic staff . . .*) and neatly presented in diagram form.
- Lastly, the sampling technique used is identified, described, and **[j]** justified. There are a number of sampling techniques from which you can choose, including: random sampling, simple random sampling, stratified sampling, cluster sampling, systematic sampling, quota sampling and convenience sampling. These sampling techniques are summarised in Appendix O. See Further Reading at the end of this chapter on where to get detailed information on statistical research, including sampling techniques.

In short, the sample piece identifies the site for the case study, states precisely where the study will take place and with what staff, including how the site and staff were chosen, and justifies each of the choices, one after the other. Although some of the choices are justified with reference to sources, there is no need to do so. You can justify your choices without reference to literature, but doing so is another opportunity to show that you are well-read.

As hinted at earlier, one criticism of the sample subsection in Appendix M is that it is rather wordy in parts and could easily be reduced without loss of marks by:

1 Simply stating the choices (*The site chosen is Inverclyde University. One particular programme will form the basis of this research . . . Convenience sampling was used and the staff chosen are as follows . . .*).
2 Then justifying all the choices in one simple paragraph or as a bullet-point list: *The reasons for the choices above are as follows. The site was chosen because . . . The choice of postgraduate programme was made because . . . Eight staff were selected because . . .* and so on.

How will you collect your data?

Remember, for this part you need to do the following:

1 Identify the data collection method(s) you will use (e.g. questionnaires, interviews, etc.).
2 If more than one data collection method is to be used, then give details.
3 Justify each of 1 and 2.

We will go through the subsection (temporarily) headed '**How will you collect your data?**' as an example of how this could be done. Once again, for

emphasis, **[h]** will show *how* data is to be collected and **[j]** when that choice has been *justified*:

- **[h]** The student immediately identifies how data will be collected: *Qualitative data will be obtained primarily through the vehicle of interviews.*
- **[h]** The student identifies the two groups subject to interviews: *Staff from the following two groups will be interviewed . . .*
- **[j]** The rationale for interviewing those groups is then given: *By selecting a variety of e-Learning stakeholders . . .*
- **[j]** The rationale for interviews is given (*Why interviews?*), first by identifying the type of data sought (*This research is interested in capturing qualitative data*), then explaining why other means are inappropriate (*As such, the use of postal or email questionnaires . . .*) and then by explaining why interviews are appropriate (*Interviews open the opportunity to discuss . . .*). As support, the student cites a source. This is a good habit to copy.
- **[h]** How the questions will be asked (under themes) is given: *The questions will be grouped within themes related to e-Learning . . .*
- **[j]** Presenting the questions under specific themes is then justified: *This will allow for . . .*
- The empirical research will also make use of secondary data. The secondary data **[h]** is identified: *Secondary data, in the form of university documents and academic staff teaching and learning material, will also . . .*
- **[j]** The reason for collecting the secondary data is then justified: *The secondary data, coupled with the interview data, will assist in . . .*
- To finish off, the student summarises information about the interview in a table and directs the reader to a number of Appendices where the questionnaires and transcripts will be placed.

The subheadings '**Where will you get your data from?**' and '**How will you collect your data?**' were used as temporary placeholders to prevent *student drift*. However, if the idea of keeping these headings, or a variation of them, appealed to you, then by all means keep them in your submitted dissertation. They have the benefit of directing your reader and letting your marker know that you understand what should go in the subsection Data Collection. If you do so, then your structure could take the following shape:

3 Research Methods
- 3.1 Introduction
- 3.2 Research Strategy
- **3.3 Data Collection**
  - **3.3.1 Where will the data come from?**
  - **3.3.2 How will the data be collected?**
- 3.4 Data Analysis
- 3.5 Limitations and Potential Hurdles

Regardless of your structure, or any substructure, that you settle on, it should now be clear that it is the combination of the choices that you make to carry out your practical research, together with the justification for those choices, that is expected of you. The next subsection – Data Analysis – is no different.

Data analysis

What you have to do in this subsection is explain the process you will use to analyse the raw data that you have collected. Once again, it is the *what* and the *why* that are important:

1 Describe what you will do, i.e. the process.
2 Explain/justify that process.

We can demonstrate parts 1 and 2 by revisiting the subsection headed DATA ANALYSIS in the sample Research Methods chapter in Appendix M. Read it now.

As before, we will use square brackets to indicate when evidence of parts 1 or 2 occurs. In this case, **[p]** stands for the *process* adopted by the student to analyse data and **[j]** when the student offers *justification* for choices made:

- **[p]** To begin with, the student reminds the reader that data will be collected under themes: *As stated previously, the data from academic staff and elite staff will be collected under themes . . . drivers, barriers, preparation, IT infrastructure, academic staff motivation . . .*
- **[j]** The student explains the benefits of doing so and how it will aid in data analysis: *The themes will help staff to focus on interview questions but it also facilitates data analysis. It will make it easier for responses within and between groups to take place . . .*
- **[p]** The student refers the reader to a diagram (Figure M.2 in Appendix M). This diagram is a visual representation of how the student intends to analyse the interview data. You too should consider using a simple diagram to illustrate how you are going to analyse your data. You can take the reader through the diagram, justifying stages where appropriate, as the student does in the sample text.
- **[p]** The student starts to explain the cumulative process reflected in the diagram: *Essentially, there will be a two-pronged approach: first, academic staff case study findings will be described and that data interpreted; second, elite staff case study findings will be described and that data interpreted, not only comparing elite staff findings against each other, but also comparing elite staff findings against academic staff findings.*
- **[j]** That iterative process is then justified with reference to sources: *Analysis of qualitative data is not a linear activity: it requires an iterative approach to capturing and understanding themes and patterns (Miles and Huberman, 1984; Creswell, 1997).*

- **[p]** An example of a basic *description* is then given: *'Of the 8 academic staff questioned on e-Learning barriers, 7 said this . . . and 1 said this . . .'*
- **[p]** An example of data *interpretation* is also given: *'It is clear that academic staff believe that a main barrier to e-Learning participation by academic staff is . . .'*
- Giving examples helps the reader understand the type of data that you will be dealing with and how you will manage that data in your data analysis. Examples also let your marker know that you have a clear understanding of what you are dealing with in your data analysis.
- The final, important, phase of data analysis in the diagram, where synthesis of data takes place, is then described and justified: **[p]** *However, it is in the second phase that, as well as comparing elite staff findings against academic staff findings, relevant Literature Review findings will also be compared and contrasted against the case study findings,* **[j]** *thus synthesising theory (i.e. what the Literature Review told us) with practice (i.e. what those in the field told us).*
- **[p + j]** The whole process is then summarised and supported with reference to a quotation: *The essence of this qualitative analysis paradigm reflects accepted practice in dealing with qualitative data, and is perhaps more succinctly described by Bogdan and Biklen (1982, p. 145) as 'working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others'.*
- Lastly, the student turns to the practical matter of how to record data during the interviews (*How will the data be recorded?*), identifies one approach (*Taking notes as respondents talk is one approach*), **[j]** justifies why that approach will not be used (*However, the disadvantage of having to write as respondents are talking . . .*), identifies the approach that will be used (*Instead, permission will be sought to record all interviews 'on tape' and have them transcribed*), and then **[j]** justifies why that approach is suitable (*Such an activity will prove time-consuming, but the resulting data will aid in the researcher's aim of gathering enriching, qualitative data. Overriding advantages include . . .*).

By this stage, you should have done the following: introduced the purpose and focus of your Research Methods chapter; identified, described and justified your research strategy; identified, described and justified where and how you will collect your data; and explained to the reader how you will analyse that data, justifying your approach. The only thing left to do now is to openly address any limitations of your research methods, including potential problems you may encounter.

Limitations and potential hurdles

Every research method has its limitations and hurdles that need to be overcome. For example, two well-known limitations of the research strategy *action*

research are: (1) the results cannot be generalised; and (2) it is not easy for other researchers to repeat another researcher's action research project to confirm the results. Action research takes place in a real environment (e.g. a classroom in a school), which means that there can be significant project management hurdles to overcome, not least that it can prove quite a challenge to complete an action research project in the allocated time.

Your task in this subsection is straightforward: identify any limitations in your research methods and potential hurdles that you need to overcome. An obvious structure to this subsection could be as follows:

- Identify limitations of your research methods and any potential practical hurdles.
- Counteract these limitations and explain how you get round any practical hurdles.
- For good measure, explain why your research is reliable.

Notice that the subsection ends with an explanation of why your research is reliable. Reliable research is research that can be trusted. Transparency is the key to trusted research, i.e. laying out the bones of how your research was put together. The combination of validity and reliability is a convincing narrative to counteract any limitations inherent in your research methods.

Appendix P contains two tables, each in turn summarising the limitations/issues and strengths for traditional and non-traditional Research Strategies and Data Collection Methods. These tables will help you answer part 1 above. Of course, you may have hurdles that are peculiar to your particular study, in which case identify these hurdles and how you intend getting round them, or at least minimising their impact.

You are not required to go through *all* the limitations for each of your research methods or go through *every* potential issue. You can mix and match as you see fit. Students tend to concentrate on the limitation of their main research method (their research strategy) and highlight one or two pressing issues, as they see them, surrounding the collection (usually the collection!) or analysis of data.

Questions that you can reflect on

- Is my research open to the accusation that it is invalid? (That is, have I argued successfully that the way I approached my research is appropriate to achieving my research objectives/questions?)
- What are the known criticisms of my chosen research strategy? (If you read the literature on your chosen research strategy, then you are bound to unearth criticisms – every research strategy has its critics as well as its supporters, some more vociferous than others!)
- Can I generalise as a result of my empirical work? (Does it matter if I can't?)

▶

- Is my sample population big enough? (For example, a criticism may be that your experiment/questionnaires/interviews, etc., are limited in number, but the lack of time available to you, as a student, may form part of your justification.)
- Is my approach to collecting data limited in any way? (For example, why am I using questionnaires when interviews might give me more meaningful results? Perhaps you are unable to get access to your research subjects or they are so geographically dispersed that it is impractical to visit them.)
- What efforts have I made to ensure that my empirical research is, as far as possible, fair and free from bias? (For example, if you know the research subjects – for instance, they may be fellow students whom you wish to interview – what mechanisms have you set in place so that your views of them and, equally, their views of you, do not influence your findings?)
- Am I vulnerable to the claim that my empirical work is unreliable? (That is, have I provided enough detail to show that I did the research and that my findings are trustworthy, e.g. provided site and sample selection information, questionnaire samples, etc.?)

Let's go through the subsection LIMITATIONS AND POTENTIAL HURDLES in the sample Research Methods chapter in Appendix M. Read it now.

The limitations and potential hurdles are itemised in a simple list consisting of three points:

1 *As with all case studies, the results of this study cannot be generalised to the wider research community (Adelman et al., 1977; Borg, 1981); in this case to how other universities prepare for e-Learning.*
2 *Next, there is the question of depending on a data collection technique – interviews – that relies on personal opinion, and so can be susceptible to bias and inaccuracy. Even more problematic, how can the researcher maintain objectivity when he interviews colleagues in an environment where he works?*
3 *The data analysis will also present a challenge: making sense of qualitative data is not easy.*

The student rebuffs these limitations and tackles potential problems, one by one, once again using a numbered list:

1 *The choice of a case study is valid because . . .*
2 *To minimise bias or poor memory recall . . .*
3 *Implementing a case study within one's place of employment has the comforting advantage of access to subjects but raises the issue of objectivity and switching hats between colleague to researcher. The researcher will adopt the following strategy to facilitate this research . . .*
4 *Furthermore, as far as is practical, staff transcriptions will be edited . . .*

5 *As highlighted earlier, the use of themes (Drivers, Barriers, etc.) and a structured iterative approach to the data analysis, from describing basic data, to placing an interpretation on that description, to synthesising the results with the Literature Review findings, all provide a highly disciplined and structured approach to managing the qualitative data.*

Lastly, after convincing the reader that the research is valid and potential issues are addressed, the subsection, and chapter on Research Methods, concludes by explaining to the reader why this research work can be relied upon: *This research is not only valid, with potential issues addressed, it is also research that can be trusted . . .*

Finally, you should conclude strongly by reminding the reader of the worth of your empirical research:

> *This empirical research will provide an in-depth study of a topical issue from the viewpoint of different stakeholders, from those at the chalk face to senior management. The insights gained from this study will prove of enormous relevance not only to the university in the case study but also to other universities seeking to advance their understanding of how to prepare academic staff for e-Learning, including drivers, barriers, and preparation models.*

This chapter has taken you through the stages of writing your chapter on Research Methods where the research methods you intend to use are from a well-established list of traditional research strategies (case study, action research, experiment, and so on), data collection techniques (interviews, questionnaires, and so on), and data analysis methods (quantitative and qualitative). The next subsection discusses how artists can write about their work in an academic way.

Artist as researcher

To whom it may concern

The term 'artist' as used in this book is interpreted widely to include students in the *fine arts* and the *performance arts* who are tasked with producing an 'artefact' (painting, sculpture, play, musical score, dance, photo exhibition, etc.) and who need to write about it within the framework of a Master's dissertation. The advice that follows is intended for artists who want to create something and critique their creation, and who therefore require a chapter on their research methods.

Although this chapter is mainly directed towards artists, students in computing departments who create computer software or computer apps or computer videos, and who are required to write about their creation, could also find a natural home here. Indeed, the traditional world of computer and technological development has crossed over so much into the world of art and drama that sometimes it can be difficult to disentangle the science from the art.

The structure for your dissertation is not a million miles away from the traditional university dissertation where the student is required to carry out empirical research:

Abstract
Chapter 1: Introduction
Chapter 2: Literature Review (or Contextual Review if you prefer)
Chapter 3: Research Methods
Chapter 4: Findings
Chapter 5: Conclusion
References
Appendices

At the heart of the problem is the realisation that traditional research strategies (case study, survey, experimental, historical research, etc.) are ill-suited to artists who wish to create something and write about their creation in a critical way. For example, which traditional research strategy helps an art school student create a painting? A case study? Not really – the student may do various versions of one painting. Multiple case studies? Not really – the versions may be in different media for different purposes. A survey? A painting is not a survey. Experimental? No – although there may be experimental aspects to painting a picture, the student may be applying tried and tested art techniques that best suit their skills-set. Action research? Not quite – the student may not be trying to solve a problem. Historical research? Although the student may be influenced by, for example, Impressionism, the painting is created in the here and now. And so on.

The painting student would encounter the same problem when trying to select a data collection technique to facilitate critical commentary on what has been painted. A questionnaire might be useful but it is not the normal way to judge paintings. Interviews? Same issue. Textual analysis? A painting is not a piece of text. And so on.

The problem is that a painting student, at a push, *could* exploit one or two traditional research strategies, and *could* exploit one or two traditional data collection techniques too, but as a principal means of researching an art piece created by the student artist, it would be like asking a footballer to wear house slippers during a game of football – it could be done, and the footballer might even score a goal, but it would be an odd fit.

The difficulty that a painter has trying to develop and critique their work using traditional research methods would also apply to others involved in the creative arts, from sculptors to weavers. Performance artists too, such as dancers, actors and musicians, would similarly struggle to apply research strategies and techniques to their work that are more geared towards either quantitative reductionism or textual analyses rather than performance art.

We will stick with the same structure for the Research Methods chapter as before:

3 Research Methods
3.1 Introduction
3.2 Research Strategy

3.3 Data Collection
3.4 Data Analysis
3.5 Limitations and Potential Hurdles

This time, though, we will discuss the completion of each part of the structure with artists in mind.

Writing a brief introduction

By this stage you should already know how to write a short introduction to a chapter. In this case, introduce the reader to the relevant research objective(s), identify the topics to be covered in your Research Methods chapter, and explain the value of your proposed practical work. For example:

> The objectives in this research were identified as follows:
>
> 1 . . .
> 2 . . .
> 3 . . .
> 4 . . .
>
> Objectives 2 and 3 refer to the creation of a piece of ceramic art and the evaluation of that piece [if that is the case]. This chapter will identify and justify the research strategy to be used to facilitate these objectives. Details of how the ceramic piece will be created are included, as well as data collection and analysis techniques to allow a critical review of the finished artefact.
>
> In addition, limitations of this research work, as well as practical hurdles to overcome, will be addressed.
>
> This practical research is important because . . .

Now on to the question of the research strategy.

Writing about your research strategy

Since the 1960s there has been much debate about the need for, and development of, a research strategy to accommodate the needs of artists. To cut a long story short, it is now accepted practice for art and drama students to produce an 'artefact' as a main research output, supported by critical reflection. What name has been given to this type of research strategy? Labels commonly used by artists include *practice-based research*, *performative research*, *practice-led research* and *Practice as Research* (PaR), each with a different emphasis:

- Practice-based research is, in the context of art, when the student creates an artefact and that artefact forms a significant part of the research project. The term 'artefact' should be interpreted widely to refer to a physical object

(e.g. a painting), a performance (e.g. a dance), a textual work (e.g. a play), sounds (e.g. a musical piece), a digital creation (e.g. a video), a piece of software (e.g. a computer program), and so on. The student will also critically review their own creation. *Practice as Research*, or to give it its acronym, PaR, normally means the same as *practice-based research*.

- *Performative research* means the same as practice-based research, i.e. the student will still create an 'artefact', but that artefact is in the performance arts, e.g. a dance, a piece of music, a scene from a play, scenery, etc. If you are a drama student, you may prefer to name your research strategy 'performative research'. You are still required to reflect critically on your creation to show evidence of critical thinking.
- *Practice-led research*, in the context of art, is often equated with practice-based research, i.e. where the student is largely assessed on the creation of an artefact. However, it is can also mean research that is influenced by practice (e.g. painting, embroidery and weaving, dance, etc.) but need not require the student to produce their own artefact, i.e. it is research that is led by, but not based on, practice. If you choose this label, then you need to make clear to the reader the interpretation you place on this label.

Do not panic about the label you use for your research. This chapter is assuming that you are creating some sort of artefact and that you will be providing critical commentary on that artefact. Irrespective of the generic term that you use to describe your main research strategy – practice-based research, Practice as Research (PaR), performative research, or even practice-led research – as long as you make the nature of your research clear (artefact + commentary), then you will have unambiguously set the scene.

Students tackling a traditional dissertation have a number of research strategies from which to choose: case study, experimental, historical, action research, and so on. This is both a blessing and a curse: they will never be short of research strategies from which to choose but they need to tread carefully and pick one that is a best fit for their research. You, on the other hand, have your research strategy handed to you on a plate. Your research strategy is practice-based research (let's stick with that label for illustrative purposes for now but other terms as explained above can be used interchangeably).

Completing this part of your chapter on research methods should be straightforward, as long as you answer the *what* and *why* questions, and any related *how* and *where* questions:

1 *What* is your research strategy?
2 *Why* are you using this research strategy?
3 *How*, *why* and *where* are you creating your piece?

To answer part 1 above, your research strategy is practice-based research (or an equivalent label). However, you need to describe that strategy to show

that you understand what it is. You can do so with reference to a definition of practice-based research (this shows that you are well-read).

> The research strategy to be used in this research is called practice-based research. What is practice-based research? So-and-so defines it as '. . . . . .' A central feature of practice-based research is the requirement . . .

Importantly, do not automatically exclude traditional research strategies in support of your main research strategy – practice-based research – just because you don't recognise them as 'arty'. If the hat fits, wear it. For example, you might want to experiment with ceramics at different kiln temperatures. In which case, you will be creating an artefact, thus identifying your main research strategy as practice-based research, but it will be supported by another type of research strategy: experimental research. Similarly, if you wanted to show the influence of music in a play, you could take key scenes from a famous play, and introduce music to change audience perception. For example, you could play comical music in *A Streetcar Named Desire* whenever Stanley and Blanche interact. You would then be exploiting two research strategies, one modern and one traditional: practice-based research (or performative research if you prefer) and a case study. If you are using another research strategy other than practice-based research, then you also need to explain what it is.

Answering part 2. The *why* answer is also obvious. You are using practice-based research because it fits in with what you want to do, i.e. create and review an artefact. These intentions should have appeared as research objectives at the start of your dissertation. Justify your research strategy with reference to the stated research objectives:

> The nature of this research work aligns perfectly with the definition of practice-based research . . . The focus of this practical work is captured in two research objectives . . . The [name artefact] will be created to meet Research Objective 2 . . . This reflects the definition of practice-based research . . . Also, the need to review an artefact that one has created (Research Objective 3) requires data collection and analysis techniques sympathetic to the creative process . . .

Answering part 3 – *how* will you create your piece, *why* are you creating your piece and *where* are you creating it? – is complex. The trick to this stage is to provide enough detail so that someone with the same level of skills as you could have a good bash at repeating your research work (that is not to say that they will end up with the exact same painting, sculpture, dance, play, musical piece, video, computer game, etc.). You can answer the how, why and what in any order you see fit. Example:

> **[How]** A papier-mâché sculpture of a calf humpback whale will be made and **[Where]** left to rot on a beach. **[How]** A tape of a baby crying will be placed inside the whale. The papier-mâché sculpture will be constructed as follows . . . Figure 1 illustrates the design and dimensions of the whale.

[Where] The sculpture will be placed on the following beach . . . **[Why]** The purpose of this piece is to . . . A calf whale was chosen, rather than, for example, a horse, because it serves the artist's purpose of . . .

If you have also included other strategies, then justify their use too.

Writing about your data collection techniques

To review your art work you will need to collect data about that art work. Once again, it is the what and why questions that are important:

1 *What* data collection techniques will you be using?
2 *Why* those techniques?

There are a host of ways that you can collect data about your artefact. There is nothing stopping you using well-established traditional data collection techniques, such as interviews and questionnaires. Practitioner-based research tends to be associated with qualitative research. So rather than closed questions, the emphasis tends to be on open questions that help to answer two core questions:

1 What do you think about your work?
2 What do others think about your work?

There are two main periods when you will reflect about your artefact: when you are creating it and after you have created it. In these moments you are trying to record your thoughts and feelings about your own work. It is too much to expect a student to write about every minute detail about the creation process; it is much more sensible to concentrate on key decision-making events as they happen.

Figure 7.1 is a simple two-stage protocol you can follow to record your thoughts. This is called 'reflection-**in**-action' because you are reflecting while

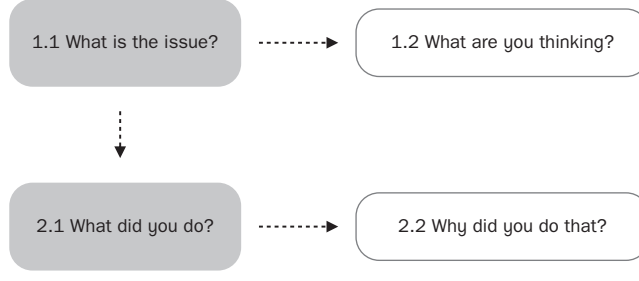


Figure 7.1 Reflection-**in**-action

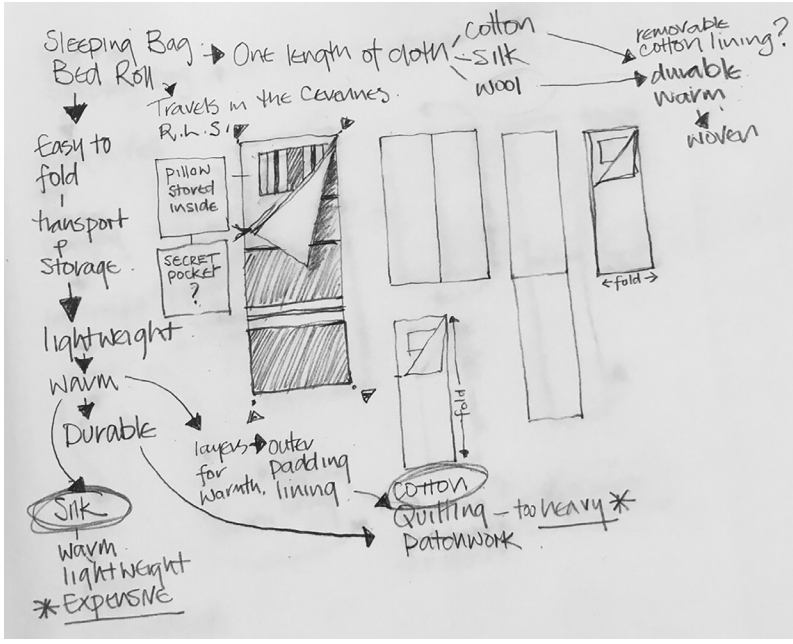


Figure 7.2 Example of reflection-**in**-action

you are **in** the creation process. When you have an issue, then note down what the issue was, what your thoughts were about that issue, the decision you made, and why you made that decision.

How you record your views during the creation process is up to you. You can use a diary, Post-it notes, annotated sketches, a word-processed document, a journal, a blog, photographs, videos, voice recordings, or whatever you find convenient. Whatever you do, make sure that you are consistent about how you record what you did at the time and why you did it because it will make it easier to collate and analyse your data later. Remember, you can use other data collection techniques as you see fit to record data about your own views during the creation process.

Figure 7.2 is an example of reflection-**in**-action, where a postgraduate art student reflects on ideas for a sleeping bag she wants to weave and does annotated drawings to note down her thoughts. She was concerned about the type of material to use and jotted down her thoughts at the time.

One way to make it easier for you to record your own views during the creation process is to use a pre-prepared form with suitable headings or questions. Table 7.2 is a reflection-**in**-action log tailor-made for self-reflection. It can be used alongside drawings or photographs or whatever you deem necessary to help you make sense of key events during the creation process.

Table 7.2 Reflection-**in**-action log

Question	Reflection-in-action log
What is the issue?	
What are you thinking?	
What are you feeling?	
What did you do?	
Why did you do that?	

Once you have created your art piece, you should record your thoughts and feeling about it. This is appropriately called reflection-**on**-action because you are reflecting **on** something you have completed. Together with the reflection-**in**-action, your reflection-**on**-action will make life easier for you when it comes to the data analysis stage. Once again, you can use drawings or photographs or voice recordings, or whatever you consider convenient and useful to record your final thoughts and feelings. Figure 7.3 is a photograph of a completed artefact (the final woven sleeping bag) which the student used as a discussion point in her dissertation.

You could also record your thoughts and feelings at a more formal level by answering the questions in the reflection-**on**-action log in Table 7.3.

In addition to your own views about your art piece, during and after its creation, you might want to get the views of other people. This usually occurs after you have created it. For example, you can exploit well-known data collection techniques such as questionnaires or interviews if you want or you can get others to put their comments in a diary placed beside your creation.



Figure 7.3 Example of completed artefact

Table 7.3 Reflection-**on**-action log

Question	Reflection-on-action
What were you trying to achieve?	
Did you achieve that?	
What are your views on what you achieved?	
What do others think about your artefact?	
Where is there a similarity/difference of opinion?	
What are your feelings?	
What key factors influenced the final product?	
In hindsight, what lessons have you learned?	
What was good? Bad? Is there anything you would do differently?	

Once you know what data collection techniques you will use to get views on your artefact, from yourself before and after creation, and from others, you are then in a position to complete the subsection on Data Collection Techniques. Remember, you will need to identify who will be subject to what data collection technique (including yourself) and you will also need to justify your choices.

Let's imagine that an art student wants to create a sculptural piece about the environment. In the example below, let **[h]** indicate *how* data is to be collected and **[j]** when that choice has been *justified* (**[h]** and **[j]** do not appear in your final submission):

> Data about the environmental sculpture will be collected from a number of sources using a variety of techniques before and after the creation of the artwork:
>
> - **[h]** During the creation process, how the artist views his own work will be noted in a series of reflection-**in**-action logs, accompanied by annotated sketches, photographs, and audio recordings. **[j]** This will allow for immediate personal observations at key points to be recorded in-situ. The reflection-**in**-action logs and other materials will appear in Appendix . . .
> - **[h]** After the sculpture has been completed, the artist will use a reflection-**on**-action log, supported by photographic evidence, to record one's views and feelings on the completed sculpture. **[j]** The reflection-**in**-action and reflection-**on**-action logs will give a before-and-after picture of what the artist was trying to do and what the artist did. **[j]** These reflective tools will also make it easier to analyse the data in a way that is disciplined, does not rely on memory, and presents a fluid developmental link from concept to creation. The reflection-**on**-action logs and other materials will appear in Appendix . . .

- **[h]** After the creation of the sculpture, the artist will gather views on the finished piece from a focus group consisting of fellow students. **[j]** This gives one's peers an opportunity to debate the purpose, quality and success, or otherwise, of the artwork, in a relaxed, non-threatening environment (Beacon, 2020). The group will be prompted to discuss specific issues, e.g. 'What do you think the artist was trying to achieve?'. The use of themes – *First impressions*, *Artist's intent*, *The environment*, *Medium and materials*, *Composition/space*, *Craftsmanship*, and *Fulfilled intent* – will keep the group on track. The specific themes for the focus group are attached in Appendix . . . An anonymised transcript of the focus group meeting is in Appendix . . .
- **[h]** Lastly, two formal semi-structured interviews will also take place between the artist and an environmentalist: before the creation of the work and after its creation. **[j]** The environmentalist is chosen because the work is a comment on the environment. Interviewing before and after helps capture the expectations of the environmentalist before the art work was created and after its creation. **[j]** Semi-structured interviews give focus to the interview and, at the same time, allow the respondent the opportunity to 'open up' (Morrison, 2019). The questions to be asked, including transcripts of the interviews, are included in Appendix . . .

Table T1 summarises the data collection techniques used in this study:

Table T1 Data collection techniques

Sculpture	Artist	Peers	Environmentalist
During creation	Reflection-**in**-action log Annotated sketches, photographs, audio		Semi-structured interview
After creation	Reflection-**on**-action log Photographs	Focus group	Semi-structured interview

As with traditional dissertation theses, it is the *what* and *why* questions that you need to answer. It does no harm, as above, to cite one or two sources in support of some of your commentary.

Writing about how you will analyse your artefact

You need to outline how you intend to analyse your collected data. For traditional dissertations the generic approach is to *describe* the collected data, *interpret* what it is telling you, then compare and contrast the findings with the results of the Literature Review. This last stage is where you seek to achieve *synthesis*. That accumulative process of *description-interpretation-synthesis*, leading to a rounded evaluation, is no different for practice-based research. There is the caveat that you are analysing data about something that you have

created. That means that there is the artefact itself and views about the artefact from you, and perhaps others, that require critical discussion. To accommodate this duality, practice-based researchers often make use of the two-fold reflection techniques described earlier:

- *Reflection-**in**-action.* Reflection-**in**-action, in the context of practical art work, occurs when you record data about your art work during the creation process.
- *Reflection-**on**-action.* Reflection-**on**-action occurs when you record data about your artefact after it has been created.

You begin to achieve synthesis when you compare and contrast your empirical findings with what you found out in your Literature Review or Contextual Review. Figure 7.4 summarises a generic framework for practice-based research. There are other, equally valid, frameworks.

The first stage – the implementation of a Literature Review or a Contextual Review – will normally have been completed before you start your empirical work. Although the second stage reflection-**in**-action will take place during the creation process, the results of that activity will appear in the Findings chapter

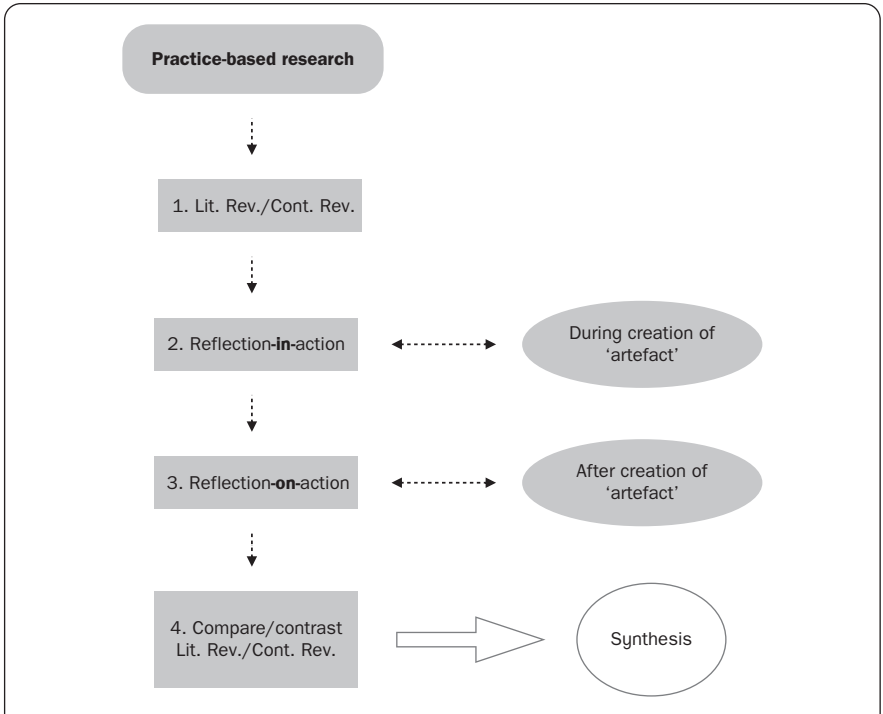


Figure 7.4 Analysis framework for practice-based research

alongside the third stage of the model (reflection-**on**-action). Similarly, stage four takes place in the Findings chapter and is the final piece of the analysis jigsaw, allowing the reader to get a rounded picture of practice-based research from intellectual development to final creation.

Another model for your practice-based research might be to drop the idea of recording reflection-**in**-action altogether, i.e. create the artefact then reflect on your creation (Figure 7.5). This is perfectly acceptable. Depending on what you are creating, the pressure of time constraints might push you in that direction anyway. Nonetheless, the opportunity to reveal your thought processes through reflection-**in**-action adds a certain richness and insight that are normally welcomed in the creative arts, where the creation process itself is often viewed as just as important as the finished article. In any event, you would still be expected to compare/contrast your practical findings against your Literature Review/Contextual Review findings.

Whichever model you choose to analyse your findings (and that does not exclude your own approach or one recommended by others), you still need to do what the traditional researcher does, and that is:

1 Describe how you intend to make sense of your data, i.e. the process.
2 Explain/justify that process.

The easiest way to complete the first part is to draw a diagram to capture your analysis process and then walk the reader through your diagram. The second part is just as simple: justify your approach, either by justifying each stage of your process as you go through the diagram, or by providing a summary

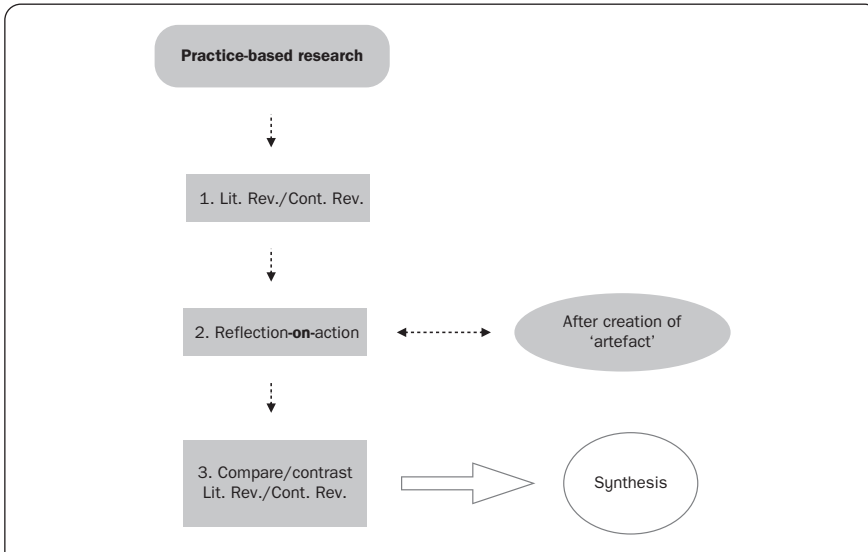


Figure 7.5 An alternative analysis framework for practice-based research

paragraph at the end after you have described your diagram. For example, if your process followed the data analysis model in Figure 7.4, then your data analysis subsection could take the following shape:

> **Data Analysis**
>
> The steps to analyse the empirical data collected in this study are shown in Figure 3.1 and described below:
>
> [Figure 3.1]
>
> Step 1. This stage has already been completed (review of literature).
>
> Step 2. The results of the data obtained during the creation process will be described then interpreted. The data will come from reflection-**in**-action logs and [if data is to be collected from other sources, then identify these sources].
>
> Step 3. The results of the data collected after the creation of the artefact, from a reflection-**on**-action log will then be described and interpreted [if data is to be collected from other sources, then identify these sources, e.g. focus group].
>
> Step 4. To achieve synthesis, the results of the empirical findings will also be compared and contrasted with the Literature Review findings in order to compare theory with practice.
>
> The advantage of this approach – analyse data from reflection-**in**-action, analyse data from reflection-**on**-action, compare the accumulative findings against the findings in the Literature Review – is that it offers a logical way to build up a rich narrative of the empirical study, pre- and post-creation. Not only will the step-by-step nature of the model make it easier for the researcher to analyse the data in a disciplined way but it will also make it easier for the reader to follow the process.

As you can see, it is the *what* (or how) and *why* questions that you need to answer: what model will you use to analyse the data about your artefact and why did you choose that model? In other words, how do you intend analysing your data and what is good about that model?

The only thing left to do now is to write about the limitations of your research methods and any hurdles you think you might need to overcome.

Writing about limitations and potential hurdles

As with other dissertations, the shape of the final part of your Research Methods chapter writes itself:

> **Limitations and potential hurdles**
>
> - Identify limitations of your research methods and any potential hurdles.

- Counteract these limitations and explain how you get round any hurdles.
- And for good measure, explain why your research is reliable.

Remember, you are not required to detail every limitation you can think of about every research method you are using, from research strategy to data analysis. It is for you to decide what you want to discuss. Students tend to focus on any perceived limitation of their chosen research strategy and/or data collection techniques. Appendix P contains summary information on strengths and weaknesses of a number of research strategies and data collection techniques, both traditional and art-based.

In the context of art research, there are three perceived limitations of a practice-based strategy:

1 It lacks the credibility and rigour of traditional academic research strategies.
2 It is subject to personal bias.
3 It is not possible to generalise the findings.

Let's address each of these in turn:

1 *Credibility and academic rigour*: The artist-researcher is a relative newcomer to the world of academic research. However, artists have quickly adapted to this new world. Their research methodology (practice-based research) is not new: it has been used by researchers for centuries in disciplines as diverse as science and education. Even in the conceptual world of philosophy there is an important place for empirical knowledge. Artists have merely adapted it to meet their specific arts-based requirements.

   Importantly, as with all research, the process of implementing the research strategy adheres to stringent academic practice, and transparently so: define research objectives; review existing literature related to the specific topic under study; carry out empirical work; report on the findings; and arrive at well-grounded conclusions based on the research, with each step in the process documented and available to the research community.
2 *It is subject to personal bias*: This criticism stems from the fact that the artist acts as creator and reviewer. The fact that the artist and the reviewer are one and the same person is neither here nor there. Researchers in traditional research disciplines regularly review their own research work without outcry. For example, action researchers will posit a solution to a problem, try it out with a group of people, then review the results; a scientist will create an experiment, test it, and review that experiment; and so on. Art work is no different.

   Student researchers, likewise, from all disciplines are tasked with creating things, whether that's an experiment, a survey, a software program, and are required to review their own work. That is what they get marks for: that they can implement a research project and critically comment on their findings. Indeed, they must sign a declaration that it is their own work. Art students are no different.

Personal bias is not an inherent quality of a research strategy: it is more a warning to avoid common pitfalls. The important point is that efforts are made in practice-based research, as with traditional research methods, to mitigate against bias: adhering to a research-based methodical approach using tried and tested techniques that are appropriate and applied in a disciplined way, and all open to scrutiny, is all that can be asked of any researcher.

3 *It is not possible to generalise the findings*: Generalisation is not the purpose of all research, otherwise much that counts as research would be dismissed. One cannot generalise from a case study but it is still valued as a research strategy, and that is because its purpose is different – to seek a deeper understanding of something. Similarly, the purpose of practice-based research as used by artists is to gain a deeper understanding of something, whether that is about the creation of a piece of sculpture or a commercial sleeping bag or a dance routine or the impact of background music on a scene in a play.

The real and immediate limitations of practice-based research in the arts are all related to its newness as a research methodology in the art world: debate and disagreement over a name for their research work resulting in inconsistent application of labels, e.g. practice-based research, practice-led research, Practice as Research, performative research, creative research, and so on; inexperience in 'talking the language' of research; and the difficulty of making the switch from practitioner to researcher. All of these limitations are ones of experience and are surmountable with the passage of time – as more artists do research, the terminology will settle down, the language of research will become familiar, experiences will be recorded and passed on, and the whole process will become less intimidating. And as more research is published, the more results can be knitted together to form generalisations.

The key to supporting your research strategy is through an appeal to validity, i.e. that your strategy supports what you need to do, whether that is to generalise or get a deeper understanding of something or solve a problem, etc.

Potential hurdles

If there are hurdles that you have identified that need to be overcome, then describe what you intend doing to avoid them or reduce their impact. That is what good researchers do. For example, is time an issue? Is cost of materials an issue? What you want to do and what you have time to do can be two very different matters. Is access to resources an issue? Do people you know form part of your research, e.g. fellow students commenting on your work? If so, how will you get them to view you as a researcher and not as a friend whom they wish to please?

Reliability

You should finish off strongly by mentioning why your research is reliable. All research projects ought to meet the test of reliability and practice-based research is no different: research activities should be recorded and described in

detail. To win trust, every key step of the practical research process is made transparent as proof that the research was indeed carried out and to allow others the opportunity to repeat the research if they so wish. You simply explain that to your reader, i.e. explain that the purpose of your practical work is clearly stated – refer to the appropriate research objective(s) – and the methods used are clearly identified and justified, with data evidence available for scrutiny and the research process, including analysis, laid out for other researchers to critique and repeat if they so wish.

If you decide to highlight perceived limitations of data collection techniques used in empirical art research, then here are some defences in support of these methods:

- All data collection techniques have their limitations. Questionnaires lack the in-depth responses found in qualitative interviews; interviews are time-consuming and dependent on the responsiveness of the interviewee; observation is subjective and time- and place-dependent; data from tests are only as good as the tests; and so on. Practice-based research is dependent on: (1) the artefact itself (painting, dance, musical piece, etc.) and (2) data about the artefact from the artist (typically using reflection-**in**-action and reflection-**on**-action tools and techniques) and from other voices (often using traditional data collection methods). Reflection is a tool that has been used by traditional researchers for centuries. Reflection-**in**-action and reflection-**on**-action are appropriate data collection and analysis techniques because that is exactly how artists develop and review their work: during the creation process and when the art piece has been completed.
- Reflection-**in**-action and reflection-**on**-action can reduce to a tick-box exercise, if one is not careful, where pre-determined questions are summarily completed in a mechanical fashion. It is not the pre-determined nature of the questions that are the problem – in fact, that is good planning – it is the answers, or lack of, that can cause concern. Unthinking reductionism can be avoided by adopting an honest and open approach to recording thoughts and feelings and by engaging in *critical* reflection.
- The analysis strategy of achieving synthesis by comparing and contrasting empirical results against stated research objectives/questions and the results of a Literature Review or Contextual Review is standard practice in the world of research.

In short, address perceived limitations in your research (it is your choice what you want to highlight) and any practical hurdles you need to overcome. Make sure that you write about how you will deal with any issues. It may be that you take the practical path trodden by all researchers at one time or another – that research design is all about trade-offs. Accepting some limitations and some problems is the price you pay for creating what you want to create in the timescale that you have, using the resources that you have access to. That is a perfectly sensible and realistic approach to take.

Finally, you should end your Research Methods chapter on a positive note by reminding the reader of the worth of your practical research. All that is required is a brief statement.

Checklist

Research methods

1 Created structure for chapter on Research Methods ✔
2 Identified, described and justified *research strategy* ✔
3 Identified, described and justified *data collection techniques* ✔
4 Identified, described and justified *data analysis process* ✔
5 Identified *limitations* of your research and potential hurdles ✔
6 Defended your work with an appeal to *validity* ✔
7 Explained how you will overcome/mitigate *hurdles* ✔
8 Explained why your research can be *relied upon* ✔
9 Finished with a statement on the *worth* of your research ✔

Further reading

Barrett, E. and Bolt, B. (eds) (2019) *Practice as research: approaches to creative arts enquiry*. New York: I. B. Tauris & Co.
Bell, J. and Waters, S. (2018) *Doing your research project: a guide for first-time researchers*. 7th edn. London: Open University Press.
Dawson, C. (2019) *Introduction to research methods: a practical guide for anyone undertaking a research project*. 5th edn. London: Robinson.
Denscombe, M. (2017) *The good research guide*. 6th edn. London: Open University Press.
Gherardi, S. (2020) *How to conduct a practice-based study: problems and methods*. 2nd edn. Cheltenham: Edward Elgar Publishing.
Leavy, P. (2019) *Handbook of arts-based research*. London: Guildford Press.
Nelson, R. (2013) *Practice as research in the arts: principles, protocols, pedagogies, resistances*. Basingstoke: Palgrave Macmillan.
Spiegelhalter, D. (2020) *The art of statistics: learning from data*. Milton Keynes: Pelican.
Vaughan, L. (2017) *Practice based design research*. London: Bloomsbury Academic.

Summary of key points

- Your *Research Methods* chapter is where you describe the methods that you will use to implement your research and, importantly, explain the reasons behind your choices. An appropriate structure would cover: research strategy, data collection techniques, approach to data analysis, and acknowledged limitations of your work, including any practical hurdles that you need to overcome.
- It is the combination of answering the *what* and *why* questions that gets you high marks, i.e. what are you doing and why are you doing that?
- The question of whether your research is *quantitative* or *qualitative* in nature, or a mixture of both, depends not on your choice of research strategy alone but on the combination of your research questions, research strategy, and data collection methods.
- *Sampling* is the process of selecting a portion of a target population. Sampling techniques available to you include: random sampling, simple random sampling, stratified sampling, cluster sampling, systematic sampling, quota sampling and convenience sampling.
- *Positivist* research is research that is objective and independent of the observer and which can be measured and predicted. *Interpretative/ phenomenological* research, on the other hand, accepts that there are many interpretations of phenomena and that these interpretations are time- and context-dependent.
- Your research work should be *valid* and *reliable*. Valid research is research that has been done using methods appropriate to your needs. Reliable research refers to the trustworthiness of your research findings, which you achieve through transparency. Validity also adds weight to the claim of reliability.
- Your *research strategy* refers to the main vehicle through which you will implement your research. There are a number of *traditional* well-established strategies to choose from, examples of which include: case study, survey, ethnographic, experimental, historical, action research and grounded theory. You must *identify* your research strategy, *describe* it and *explain* why it is appropriate to your research.
- The research strategy for *artists* is known under different names – practice-based research, performative-research, Practice as Research (PaR), and practice-led research – but the terms can be used interchangeably provided two criteria are met: (1) an art form is created by the artist; and (2) it is critiqued by the artist (it may also be critiqued by others). 'Artist' is interpreted loosely to include anyone involved in creating an artefact. 'Artefact' is also interpreted loosely to include any art form, examples of which include a painting, a dance, a piece of music, a scene from a play, a video, or a software program.
- The *traditional data collection techniques* include interviews, questionnaires, observation, as well as documentary evidence. In traditional dissertations, where empirical work is also carried out, students are ▶

normally required to state from where they will get their data (e.g. a football stadium), their sample size (number of experiments/companies/people), their sampling technique (random, stratified, quota, convenience, etc.), and how they will extract their data (interviews, observation, questionnaires, tests, etc.). The choices made must be justified.

- The principal *data collection technique* favoured by artists is based on critical self-reflection tools using diaries, logs, sketches, photographs, voice recorders and any other tools that will help the artist reflect about their work. There are two types of self-reflection: reflection-**in**-action and reflection-**on**-action. Reflection-**in**-action occurs during the creation of the artefact and is a means of collecting data about a current issue as it happens (i.e. thinking on one's feet); reflection-**on**-action takes place after the creation of the artefact and is a means of making sense of the finished work with an eye on lessons learned.
- A *reflection-**in**-action log* is a useful tool to record key thoughts and feelings during the creation process. A *reflection-**on**-action log*, consisting of summative questions, is a useful tool to aid reflection after the creation of an artefact.
- A framework for *data analysis* is an outline of how you expect to analyse your collected data. You need to describe this process to your marker. Data analysis = description of basic data + interpretation of what that data is telling you + synthesis of collected data with Literature Review findings.
- You ought to identify *limitations* of your work and *potential hurdles*. Counteract any limitations with an appeal to validity and reliability. Explain what you have done to deal with potential hurdles.
- It is good practice to end your Research Methods chapter by reminding the reader of the *worth* of your research.

Chapter **8**



Writing up your findings

• Writing up the findings: traditional dissertations • Writing up the findings: art and performance-based dissertations • Checklist • Further reading • Summary of key points

This chapter is in two parts. The first part – 'Writing up the findings: traditional dissertations' – is intended for those students completing a traditional dissertation, i.e. one where traditional research methods have been used (case study, survey, experimental research, questionnaires, interviews, etc.); the second part – 'Writing up the findings: art and performance-based dissertations' – is intended for artists involved in practice-based research, i.e. where an art form of one kind or another has been created (painting, sculpture, dance, music piece, etc.) and is to be reviewed by the artist and perhaps others.

Writing up the findings: traditional dissertations

The conventional approach to completing a dissertation typically involves an extensive Literature Review followed by the implementation of empirical research using well-established research methods. A case study supported by interviews using structured questionnaires is an example of this type of research. If you have collected your empirical data, you should now be in a position to write up your empirical findings:

Abstract
Chapter 1: Introduction
Chapter 2: Literature Review (or Contextual Review, if you prefer)
Chapter 3: Research Methods
Chapter 4: Findings

Chapter 5: Conclusion
References
Appendices

The task of writing up your results is a necessary and, for the most part, a straightforward process. If you have worked out beforehand how you will analyse your results, then your job will be that much easier.

> **! A common mistake**
>
> A common mistake by students is to write their chapter on research methods devoid of any reference to data analysis, with the result that when they eventually have the data in front of them, they are not sure how to make sense of it!

Title

If you give your write-up chapter the minimalist title, as one student did and others still do, 'Chapter 4: Findings' – assuming it is the fourth chapter, after Introduction, Literature Review (or Contextual Review), and Research Methods – then you will be missing an easy opportunity to signpost your work. Much better is the student who used her title to indicate the type of Findings she was dealing with: Case Study Findings.

Chapter 4 Case Study Findings

Not only that, she also let the reader know about the three intellectual activities that she would cover when reporting her findings:

Chapter 4 Case Study Findings: Description, Analysis and Synthesis

Try and replicate that approach. The advantages are twofold: it reminds the reader of the type of empirical research you did (case study, survey, action research, etc.) and it also prepares the reader for the core structure of your write-up, i.e.

1 a simple *description* of your results, followed by an *analysis* of what your empirical data is telling you; and, finally,
2 *synthesis* of your empirical findings with your Literature Review findings.

Although your chapter title may give the impression that the content is purely about your empirical findings, this is not the case – yes, you are expected to report on the data that you have collected, but you are also expected to compare and contrast your empirical findings against what you discovered in your

Literature Review (or its equivalent), otherwise what was the point of initiating a review of literature?

Structure

A meaningful structure for your Chapter 4 Findings (assuming you did a case study) that reminds you of the tasks to be completed could be:

4 Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings: Description and Analysis of Results
- 4.3 Synthesis of Findings with Literature Review
- 4.4 Summary

There are alternative structures that are dependent on how many things you are writing about. For example, if you implemented interviews with some staff and gave others a questionnaire to complete, then you could alter your structure accordingly to make that clear:

4 Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings: Interviews
- 4.3 Findings: Questionnaire
- 4.4 Synthesis of Findings with Literature Review
- 4.5 Summary

Alternatively, you could decide that it is more convenient to synthesise your results as you go along, rather than wait until stage 4.4 above:

4 Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings: Interviews
- 4.3 Findings: Questionnaire
- 4.4 Summary

This would mean that in 4.2 above you would describe and analyse the results of the interviews and then compare the results against the Literature Review findings. Then in 4.3 above you would describe and analyse the results of the questionnaire *and* compare those results against the interview results *and* compare them against the Literature Review findings. In other words, there would be no need for a separate synthesis subsection. It is up to you whether or not to synthesise your results as you go along or to leave that activity to a separate subsection.

Introduction

Normally your introduction to a chapter is very brief. The introduction to your findings chapter will be slightly longer than normal because you ought

to start by: (a) reminding the reader of the research objective to which this activity refers, (b) reminding the reader of *the data you set out to collect*, (c) outlining how *you intend writing up* your empirical results, and (d) helpfully placing your empirical research *in context* (e.g. some information about the environment in which the data was collected). On the latter point, if your data was derived from a case study of an organisation, then give some background information about that organisation; see the example below (**[a]**, **[b]**, **[c]** and **[d]** would not appear in your final submission – they are merely there as temporary markers):

> **[a]** This empirical study covers research objective 3 of this dissertation:
>
> *Explore staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.*
>
> **[b]** The data was collected on specific themes – e-Learning drivers, barriers, preparation issues, IT infrastructure, academic staff motivation, and reflections and future directions – using questionnaires and interviews from two groups of stakeholders involved in e-Learning at Inverclyde University (IU): eight academic staff within Division X, located in the Inverclyde Business School (IBS), and seven senior staff in Division X, IBS and IU (see Figure 4.1).
>
> **[c]** The case study write-up is approached in a highly structured way. First, a description is provided of academic staff results, theme by theme, with ongoing analysis as the results accumulate. Next, this process is replicated with the results from senior staff, but with the additional task of comparing academic staff results against senior staff results. Lastly, the summative results from the empirical case study will be compared against the Literature Review findings.
>
> **[d]** IU is a relatively new university, with a focus on domestic students. However, the university is ambitious with an eye on an international market. Like most universities, it has invested heavily in e-Learning software (Blackboard) to accommodate domestic and international students. Most courses use some aspect of Blackboard in normal course delivery but IU is now looking to develop dedicated e-Learning programmes. It is in the context of these developments and aspirations in which this study is implemented. It should be appreciated that universities are complex organisations and that the above is not an attempt to *explain* IU or describe fully its operation or culture, but merely to place the study in context.

If you are short of words, you can place background information in an appendix. Also, let the reader know *in which appendix* they will find evidence of your interviews, experiments, questionnaire responses, e.g. 'The transcripts of the interviews for academic staff can be found in Appendix B; the transcripts from the senior staff interviews are in Appendix C.'

The following is an example of a bad attempt at writing the introduction to the findings:

> **4.1 Introduction**
>
> This chapter will discuss the findings of this research. These findings will include views of managers and others in the field as well those affected by the policy decisions.

There are a number of deficiencies in this Introduction that you need to avoid. It is *too* brief, lacking in any meaningful information. There is no mention of the research objective, the research strategy or the data collection techniques (a full description is not required – just a sentence or two on each as a reminder to the reader). Nor is there any mention of how the student will carry out the write-up. 'These findings will include the views of managers . . .'. Which managers? Views related to what issues? Who are the 'others' and in which 'field'? What policy decisions?

The write-up process: description, analysis and synthesis

The heart of the chapter on your empirical findings will revolve around the tasks of *description* (of your empirical data, e.g. two people said this, four people said that), *analysis* (of what the data are telling you) and *synthesis* (of your discussed empirical results against your literature findings). If you just describe your results, you'll get basic marks; if you provide some analysis, you will get more marks; if you show evidence of the higher-level skill synthesis, i.e. combining various components to see your research in the round, then you'll get even more marks.

In this chapter you are mainly focusing on your own empirical findings, with the added narrative of comparing what you found against what you read. Figure 8.1 captures the cyclical nature of writing up your empirical findings, culminating at some stage (usually in your concluding chapter) in an evaluation of your overall work.

Once you have carried out your description, analysis and synthesis, it is good practice to provide a summary of your findings. Even here, if you are running short of words, you can make the alternative decision to summarise your findings in your Conclusion chapter. If you have plenty of words to spare, then there is no harm in doing both; if you are running close to your word count, then think strategically and put the summary of your findings in your Conclusion.

Example 1

To demonstrate data *description*, *analysis* and *synthesis* in practice, we will revisit the e-Learning case study, where two sets of university staff – academic staff and senior staff – were interviewed on aspects of e-Learning. The early stages of reporting on responses to questionnaires or interviews tend to yield

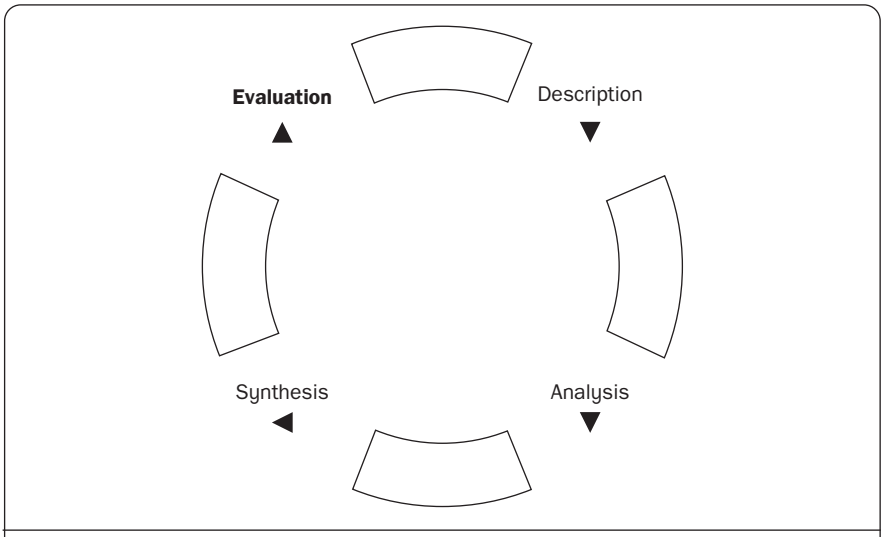


Figure 8.1 Process of description, analysis and synthesis leading to evaluation

basic information, with little to get your teeth into, as illustrated in the following example interview question and answer write-up:

> *The University's Strategic Planning Document makes reference to e-Learning targets and objectives. Do you know what these are?*
>
> **Response**
>
> Seven of the eight members of the programme team replied 'No' and one member of staff answered, 'Eh, to be honest with you, I don't. I know that there is some vague push for e-Learning but I'm not clear on the specifics.' Thus, no members of staff knew what the university's strategic objectives and associated targets were in relation to e-Learning.

The above response starts with a basic report (i.e. *description*) of the response to the question, with a quote to illustrate a response: *Seven of the eight members of the programme team replied 'No' and one member of staff answered, 'Eh, to be honest with you, I don't. I know that there is some vague push for e-Learning but I'm not clear on the specifics.'* Then a basic comment (i.e. *analysis*) of what that data is telling us is given: *Thus, no members of staff knew what the university's strategic objectives and associated targets were in relation to e-Learning.*

The same approach of description-analysis is then adopted with academic staff for the other themes e-Learning barriers, preparation issues, etc. Then the

process of description-analysis is applied to senior staff responses to the same themes, but this time both results are compared. Lastly, the empirical results are compared against the Literature Review findings, reflecting the following structure:

4 e-Learning Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings: academic staff
  - 4.2.1 Theme: e-Learning drivers
  - 4.2.2 Theme: e-Learning barriers
  - 4.2.3 Theme: Preparation issues
  - 4.2.4 Theme: IT infrastructure
  - 4.2.5 Theme: Academic staff motivation
  - 4.2.6 Theme: Reflections and future directions
- 4.3 Findings: senior staff
  - 4.3.1 Theme: e-Learning drivers
  - 4.3.2 Theme: e-Learning barriers
  - 4.3.3 Theme: Preparation issues
  - 4.3.4 Theme: IT infrastructure
  - 4.3.5 Theme: Academic staff motivation
  - 4.3.6 Theme: Reflections and future directions
- 4.4 Synthesis with Literature Review
- 4.5 Summary

Alternatively, the student could have decided to simplify the write-up process by carrying out the description-analysis-synthesis process under each theme as he went along, reflecting the following chapter structure:

4 e-Learning Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings
  - 4.2.1 Theme: e-Learning drivers
  - 4.2.2 Theme: e-Learning barriers
  - 4.2.3 Theme: Preparation issues
  - 4.2.4 Theme: IT infrastructure
  - 4.2.5 Theme: Academic staff motivation
  - 4.2.6 Theme: Reflections and future directions
- 4.3 Summary

Regardless of the write-up process adopted, let's suppose both sets of staff (academic staff and senior management) were then asked the question: '*What, in your view, is the rationale behind the university's drive for e-Learning environments?*' Once again, initial reporting will involve basic

descriptions of what they said. For example, let's suppose the academic staff answered as followed:

> *What, in your view, is the rationale behind the university's drive for e-Learning environments?*
>
> **Response (academic staff)**
> Three members of staff viewed it as a cost-saving exercise. Two members of staff believed the university's interest in e-Learning was driven by their competitors and perhaps cosmetic. Two members of staff gave the combined reasons of efficient use of resources coupled with university image. One member of staff held a positive view, believing that the university management did not intend that e-Learning be seen as 'a replacement for traditional modes of delivery, but to complement traditional modes of delivery' and that there existed the potential for professional development initiatives for those 'who can't attend traditional face-to-face modes'.

Try and get into the habit of summarising results for your reader. Doing so can act as a mini-analysis:

> Of the eight respondents, only one viewed management intentions in a wholly positive light, with the majority suspicious that management were introducing e-Learning to make cost savings or to 'look good' or a combination of both. Only one member of staff made any explicit reference to university management intentions as an attempt to 'enhance the student experience as well'.

Next, we could describe the responses from the senior staff to the same question (irrespective of the structure of our chapter). At this stage we might still only be mainly engaged in simple description:

> *What, in your view, is the rationale behind the university's drive for e-Learning environments?*
>
> **Response (senior staff)**
> One respondent responded curtly: 'I don't know. But I know what the Business School's is.' Another did not answer the question directly other than to say that the university has 'a good rationale in terms of its vision for the future of where the university is to go and how e-Learning can support that', but added that 'what it hasn't considered is how it will embed e-Learning in the systems throughout the university'. One member of staff thought that 'there wasn't a big overall university picture' and that there were many perspectives on the subject. Emphasising that he was presenting his own personal perspective, he conjectured that the rationale behind the university's drive for e-Learning was linked to student

> freedom of choice in terms of 'how, when, where, what to learn', in effect, issues related to flexibility of access and delivery.

Continuing with basic reporting, peppered with supporting quotes:

> The above four senior staff then went on to suggest a university rationale for e-Learning. One member conjectured that he would like to think that it had reasons to do with 'effectiveness of learning', but suspected that the rationale was more to do with efficiency, specifically releasing staff from teaching duties to pursue research income and consultancy activities. A second member agreed that the rationale might be linked to efficiency – 'I can give you a rationale' – in making the university more cost-effective by enhancing quality and reducing costs at the same time. However, he made it clear that he did not agree with this rationale and that, contrary to this rationale, the quality–cost trade-off remains the same: 'I think all the evidence so far is that the quality–cost trade-off stays the same, em, in other words if you use e-Learning, if you invest in e-Learning you push quality up but you also push costs up . . . I don't believe it actually.'
>
> The two other senior staff members cited the same two reasons behind the university's push for e-Learning: to compete with other universities engaging in e-Learning ('that competitive element, a need to go for a wider global market'; 'maintaining some degree of presence relative to other universities') and to implement the university's objective of wider access ('wider access in terms of outreach to more remote communities'; 'widen our inclusiveness and accessibility').

Although the descriptions above are quite prosaic, with no analysis, quotations have been included to colour and support the descriptive process. Once again, you can summarise the results, particularly if there are salient points that you wish to highlight:

> No member of senior staff stated that they knew the rationale behind the university's drive for e-Learning. One respondent said categorically that he did not know, another respondent offered a view on the rationale without saying what she thought it was, and five others made it clear that they had a personal view on what it might be. Two staff suggested that the rationale may be about efficient use of resources (with one member suspecting this to be the unstated university rationale, and the other disagreeing with the logic of that rationale); two staff thought that it might concern the twin elements of competitiveness and student access; with one member of staff suggesting that the rationale was connected to student freedom of choice. Even where the staff offered a suggested rationale, their suggestions were varied.

Once you have assembled a certain level of description, you can then enrich your work by offering intelligent comment, i.e. analysis. You can now take the opportunity to show off your analytical skills by expressing an opinion on the views given by both sets of staff:

> The replies from the elite staff and the academic staff suggest that neither the senior staff nor the teaching staff had a consistent idea among their own group of the university's rationale for e-Learning. However, some staff produced suggestions that coincided in two similar groupings (competitiveness, cost-cutting/efficiency), but elite staff members also introduced the idea of accessibility (not mentioned by academic staff) and academic staff offered a less charitable gloss on the university's reasons for advancing e-Learning. Also of interest is that whereas five of the eight academic staff viewed cost-cutting/efficiency as a reason for the university wishing to engage e-Learning, only two elite staff believed the rationale was linked to cost-cutting/efficiency.

In effect, when you are *analysing* your empirical data, you are offering comment that you support with reference to your described data. Finally, findings from the Literature Review on the forces driving e-Learning can then be recalled with a view to synthesising theory with practice, adding another layer of understanding and depth:

> The literature review highlighted a number of forces driving e-Learning, with the main drivers reflecting a desire to improve *quality*, *flexibility* and *effectiveness* of educational delivery (with the latter referring to value for money), all within the context of the Government's target of achieving substantial increases in the student population (Dearing, 1997; Jung, 2000; Farrell, 2001; Epic, 2002; Department of Education and Skills, 2003). Only one member of staff interviewed (an academic) referred to enhanced quality as a driver, with the other staff, elite and academic, highlighting either flexibility of delivery (e.g. on and off campus) or cost-cutting/efficient use of resources as primary motivators for Inverclyde University adopting e-Learning.
>
> The primary focus for introducing new technologies in an educational environment ought to be to enhance the student learning experience, i.e. improve the quality of educational delivery. Indeed, SHEFC (2003) warn against introducing e-Learning as a way to cut costs, reflecting that it can cost six times as much to develop an e-Learning programme than a traditional programme. Similarly, a report for the CIPD (Sloman and Rolph, 2003) echoed SHEFC's views by stating that if institutions believe that e-learning will automatically save them costs, then they will be disappointed.
>
> It is interesting to note that in the interviews above, it was mainly the academic staff who saw the rationale behind e-Learning as a cost-cutting/

efficiency exercise, not the elite staff. Perhaps this reflects the earlier point raised in the Literature Review that an e-Learning strategy is important, not only to convey an institution's direction in e-Learning, but also to explain the rationale behind its usage, and so remove potential misconceptions.

Once the theme on e-Learning drivers is completed, the same process of description → analysis → synthesis is repeated for the other themes. In this case, e-Learning barriers, preparation issues, IT infrastructure, academic staff motivation, and reflections and future directions.

It should now be evident that you slowly build up your results by describing who said what (or did what). The mini summaries will help keep you focused on key points. Then, as you introduce more results, you can offer more commentary (i.e. analysis) of what the data is telling you. That usually involves cross-referencing results (this group said that, but another group said this; or, the responses to question 5 supported/contradicted the responses to question 6). Lastly, once you have a good understanding of your empirical results, you can then compare the story they tell against the narrative that emerged from your Literature Review.

There are various tools and techniques that you can use to describe and analyse your empirical findings, ranging from simple descriptive graphs, such as bar charts and tables, to more complicated statistical analysis. It all depends on the type of data that you have and what you want to do with the data. If your research is essentially qualitative in nature, then using themes (as in the case study example) makes sense; if your research is mainly quantitative in nature, then you will exploit quantitative instruments for measurement and analysis. In either case, summary tables and/or graphs could be used to good effect.

Example 2

A student, who was carrying out research on the elderly's views on social media (Facebook, Twitter, etc.), epitomised how to develop the findings chapter, progressively addressing the need to describe, analyse and synthesise her findings. The chapter on her findings had a very simple structure:

CHAPTER 4 Case Study Findings: Description, Analysis and Synthesis
- 4.1 Introduction
- 4.2 Findings
  - 4.2.1 Focus Group 1
  - 4.2.2 Focus Group 2
  - 4.2.3 Focus Group 3
- 4.3 Summary

The introduction to her findings recalled her research strategy and data collection techniques: a case study of three focus groups of elderly citizens living in a community centre. The reason for the study – to ascertain their views/uses of

social media – was repeated for the benefit of the reader. She also provided some background information on the community centre. There was a subsection for each focus group: Focus Group 1, Focus Group 2 and Focus Group 3. Within each of these subsections there was a further subdivision, reflecting the student's specific research objectives:

Theme 1 (Research Objective 1): clarification of the terms 'elderly' and 'social media'
Theme 2 (Research Objective 2): elderly use/views of social media
Theme 3 (Research Objective 3): barriers to use of social media

The mini-write-up of the Focus Group 1 results was, as expected, mainly descriptive with some attempt at basic analysis. When the student wrote about her Focus Group 2 results, she once again began by describing the focus group discussions against each of her research themes. However, she was now in a position, because she could compare her results against those of Focus Group 1, to offer a more meaningful analysis. When she got to Focus Group 3, she described the results for that group and then compared and contrasted the findings against those from Focus Group 1 and Focus Group 2. By the time the student completed the mini write-up of the Focus Group 3 subsection, she had quite comprehensively and cumulatively described and analysed her case study findings. She then addressed the matter of synthesising her empirical findings against her literature findings, once again relative to her research themes/objectives. She also included a final subsection in her write-up chapter in which she bullet-pointed her main findings. The type of academic activity that took place in this example is shown in Table 8.1.

The student could have taken a slightly different approach to writing up her results. Instead of implementing the synthesis at the end of the Group 3 discussion, she could have created a separate subsection to carry out the comparison/

Table 8.1 Academic activity in student's write-up

Section 4.2 Findings	Activity	Cumulative activity
4.2.1 Focus Group 1	Reporting of Group 1 results	Description
4.2.2 Focus Group 2	Reporting of Group 2 results + Comparison with Group 1 results	Description + = Analysis
4.2.3 Focus Group 3	Reporting of Group 3 results + Comparison with Groups 1 and 2 + Comparison with Literature Review	Description + = Analysis + = Synthesis

contrast between her empirical findings and her Literature Review findings (highlighted below in bold for emphasis):

CHAPTER 4 Case Study Findings: Description, Analysis and Synthesis
4.1 Introduction
4.2 Findings
4.2.1 Focus Group 1
4.2.2 Focus Group 2
4.2.3 Focus Group 3
4.3 **Synthesis of Findings with Literature Review**
4.4 Summary

Alternatively, she could have made the comparison with her Literature Review findings as she reported and analysed the results from each focus group (Table 8.2). When to compare your empirical results with your Literature Review findings is a matter of personal choice.

As you can see, at each stage of description/analysis/synthesis, you are building up a thick account of your results. It can be a tedious process but one that is necessary if you want to do justice to your research.

You can summarise your findings in one paragraph or two or provide a bullet-point list of key points. There is a technique to writing a summary, irrespective of the format you choose:

- Introduce your summary in one sentence (use the word 'summary' to make it clear that you are providing one). Example: 'In summary, the main points from this empirical work are as follows . . .'

Table 8.2 Alternative approach to write-up

Section 4.2 Findings	Main academic activity	Cumulative activity
4.2.1 Focus Group 1	Reporting of Group 1 results	= Description + analysis
	Comparison with Literature Review	= Synthesis
4.2.2 Focus Group 2	Reporting of Group 2 results	= Description + analysis
	Comparison with Group 1 results	= Analysis
	Comparison with Literature Review	= Synthesis
4.2.3 Focus Group 3	Reporting of Group 3 results	= Description + analysis
	Comparison with Groups 1 and 2	= Analysis
	Comparison with Literature Review	= Synthesis

- For each subsection in your Findings, capture the main points in one or two sentences.
- Conclude, in one sentence, with an overall comment (e.g. 'It is clear that . . .').

Alternatively, you can choose to leave your summary to your concluding chapter when you summarise all your work, mixing mini-summaries of your Literature Review and empirical work with concluding points for each research objective, as shown in Chapter 9 'Concluding your dissertation'.

Writing up the findings: art and performance-based dissertations

There is much in common between the write-up of the findings in a traditional dissertation and the write-up of the findings in an art or performance-based dissertation. You will still need a title, an introduction, something you will be writing about (in your case, something you have created), and a summary (though that can appear in your concluding chapter instead); and all with a keen eye on *describing* your results, *analysing* them for the reader (i.e. giving your view on the results), and achieving all-round *synthesis* by reflecting on your output with reference to what you wrote in your Contextual Review (or Literature Review).

Let's assume that you completed a Contextual Review rather than a Literature Review, though it makes no difference in terms of the technique of writing up your findings. By this stage you ought to have completed the first three stages of your dissertation and had a good bash at creating whatever it is you said that you would create:

Abstract
Chapter 1: Introduction
Chapter 2: Contextual Review
Chapter 3: Research Methods
Chapter 4: Findings
Chapter 5: Conclusion
References
Appendices

Title and structure

Let's start with a basic generic structure first, then colour in the details. A generic structure for your *findings* chapter, assuming it is Chapter 4, could be along the following lines:

4 Findings
4.1 Introduction
4.2 Findings: description and analysis of results

4.3 Synthesis of findings with Contextual Review
4.4 Summary (optional: can be placed in your concluding chapter instead)

Let's assume further that the artefact you created was a woven sleeping bag (the one in Chapter 7) and that your empirical findings will consist of two perspectives: your views on what you created and opinions expressed by others. We can now add more meaningful detail to your heading and subheadings:

4 Findings: Woven Sleeping Bag
4.1 Introduction
4.2 Critical reflection on woven sleeping bag: the artist's perspective
4.3 Critical reflection on woven sleeping bag: how others see it
4.4 Synthesis of findings with Contextual Review
4.5 Summary (optional; can be placed in Conclusion instead)

Alternatively, you could omit subsection 4.4 and instead reflect on your Contextual Review as you complete 4.2 and 4.3:

4 Findings: Woven Sleeping Bag
4.1 Introduction
4.2 Critical reflection on woven sleeping bag: the artist's perspective
4.3 Critical reflection on woven sleeping bag: how others see it
4.4 Summary (optional: can be placed in Conclusion instead)

Remember, there are two main tools (described in Chapter 7) to help you reflect: a *reflection-**in**-action* log used to record your thoughts and feelings at important moments during the actual creation process, and a *reflection-**on**-action* log (essentially a list of directed questions) to help you reflect on what you finally produce.

Let's now go through each of the stages for 'Chapter 4 Findings: Woven Sleeping Bag' and discuss the content to give you an idea of what you should be doing.

Introduction

The Introduction to your *findings* chapter is straightforward. Keep it simple. Let the reader know what they can expect in this chapter and take the opportunity to remind the reader how you will go about describing, analysing and synthesising your work, including views expressed by others about your work. Include any contextual information that you feel would better prepare the reader to understand your write-up. Example Introduction:

> This chapter presents the findings of this practice-based research dissertation: reflections on the creation of a woven sleeping bag. This is in accordance with research objective 3 of this dissertation: 'To evaluate the created artefact stated in research objective 2 through the vehicle of critical reflection.'

There will be a three-staged approach to this reflection.

Stage 1. First of all, the artist will critically reflect on the work created.

Stage 2. Views expressed by others will be presented and discussed.

Stage 3. Lastly, the views of the artist and others will be discussed in relation to the findings in the Contextual Review.

Data on the art work (a woven sleeping bag) was collected using a number of tools and techniques. Data from the artist was collected during the creation process using a number of reflection-**in**-action logs. To aid post-creation reflection, a reflection-**on**-action log was completed by the artist. These logs will be used to complete Stage 1 above. For Stage 2, other opinions on the artefact were obtained via a focus group of one's peers. [Note: if you had other, or different, data sources, then you would mention them here, e.g. structured interviews with an environmentalist pre- and post-creation, if that were the case.]

The completed reflection-**in**-action and reflection-**on**-action logs can be found in Appendix X. Notes on the focus group meeting can be found in Appendix XX.

Critical reflection on woven sleeping bag: the artist's perspective

If you are using the reflection-**on**-action log discussed in Chapter 7, 'Research methods 2: artist as researcher' (reproduced below for your convenience in Table 8.3) to reflect on what you created, then answer each of the questions in turn, providing in-depth commentary as you see fit. The log contains two questions on what others think of your completed artefact (see below). If you have collected data on other views, then you can refer the reader to where you discuss these views.

Table 8.3 Reflection-**on**-action log

Artefact: < Title of artefact >	**Reflection-on-action**
What were you trying to achieve?	
Did you achieve that?	
What are your views on what you achieved?	
What do others think about your artefact?	See focus group discussion
Where is there a similarity/difference of opinion?	See focus group discussion
What are your feelings?	
What key factors influenced the final product?	
In hindsight, what lessons have you learned? What was good? Bad? Is there anything you would do differently?	

Table 8.4 Reflection-**in**-action log

Question	Reflection-in-action log
1. What is the issue?	
2. What are you thinking?	
3. What are you feeling?	
4. What did you do?	
5. Why did you do that?	

If you completed a reflection-**in**-action log during the creation of your artefact to record your thoughts and feelings at key points during the creation process, then you can also use the data from the log when you do your list-creation analysis. The reflection-**in**-action log is reproduced for your convenience in Table 8.4. The data could be used to help answer some of the questions asked in the reflection-**on**-action protocol in Table 8.3. You can also refer to sketches and photographs of your work in your discussion (if you do, then make sure that you mention them as data sources in your introduction to this chapter).

Apply the process of description-analysis

First, describe the artefact and your views on it at a basic level, making use of reflection-**in-/on**-action logs and/or photographs/sketches/notes, etc. where appropriate. Next, offer critical commentary on those descriptions. In other words, start with basic 'what' questions and add depth by providing 'why' answers:

- What did I set out to do?
- Why did I want to do that?
- What did I eventually create?
- How did I create it?
- Why did I do it that way*?*
- Did I achieve what I set out to do?
- Why do I think that? Did my views change over time? Why? And so on.

It is the explanations that differentiate *critical* reflection from mundane recall. You can see that the list of questions in the reflection-**in**-action and reflection-**on**-action logs is a starting point to critical reflection. You can add more post-creation questions as you see fit. Once you get in the groove you will find yourself adding/changing the questions to fit your particular scenario.

Critical reflection on woven sleeping bag: how others see it

Remind the reader how you captured the views of others. If you are using the reflection-**on**-action log (Table 8.3) as a vehicle for reflection, then it is the following two questions from that log that you need to answer:

1 What do others think about your artefact? This question can be subdivided into themes to guide those commenting on your work, e.g. *First impressions*, *Artist's intent*, *The environment*, *Medium and materials*, *Composition/space*, *Craftsmanship*, and *Fulfilled intent*.
2 Where is there a similarity/difference of opinion between what they think and what you think?

Provide analytical explanations and contextual information as you see fit. If the opinions expressed by others occurred during the creation of your artefact, then how did you respond to them? Did they have any influence on what you produced? You can also discuss the question '*What are you feeling?*' in relation to the views expressed by others.

When writing views of others, make sure that you still apply the process of *description-analysis*. Start with basic descriptive questions and then analyse the answers. What do others think about your artefact? Do they offer an explanation for their views? What do you think about these views/explanations? Why do you think that? Where is there a difference of opinion about their views and yours? Why do you think that is? And so on.

It is in the next subsection where you can finally complete the tripartite cycle of *description-analysis-synthesis* when you discuss your empirical findings with reference to your earlier Contextual Review (or Literature Review, if that is what you did).

Synthesis of findings with Contextual Review

At this point you reflect on your views on what you created and the views of others (if there are others) in relation to what you read and wrote about in your Contextual Review.

There could be practical questions you might want to consider. For example, perhaps the Contextual Review made assumptions about design and production that were not available to you as a student on a limited budget, working under tight time constraints, i.e. the literature offered advice on the assumption that professional resources supported by a team of seasoned experts would be available, but that your design decisions had to be altered to fit time and resource constraints.

Perhaps there was advice you came across in your reading that you thought of little importance but on reflection proved invaluable. Or perhaps there is advice that you feel ought to be included in the literature that is missing or not given due weight.

Important reminder: instead of leaving the synthesis to the last, as above, you could refer to your Contextual Review when you describe and discuss your

views, and then when you describe and discuss how others see your work. As an artist, you may find that embedded approach more natural. That choice is one for you to make.

Summary

Below is an example summary for the woven sleeping bag example. Note that one sentence is used to introduce the summary ('In summary, the salient points from the findings of this practice-based research work – to replicate traditional Bedouin weaving in a modern setting – are as follows.'), with each core subsection in the Findings chapter summarised in turn.

In the woven sleeping bag example, there were five subsections in the Findings chapter:

4 Findings: Woven Sleeping Bag
- 4.1 Introduction
- 4.2 Critical reflection on woven sleeping bag: the artist's perspective
- 4.3 Critical reflection on woven sleeping bag: how others see it
- 4.4 Synthesis of findings with Contextual Review
- 4.5 Summary (optional: can be placed in Conclusion instead)

However, you can exclude 4.1 Introduction and 4.5 Summary, which leaves summative commentary required for three subsections: the artist's views on the completed woven sleeping bag, how others see it (in this case, a focus group), and comparison of both sets of views against the Contextual Review, with a concluding comment (in this case, on a lesson learned):

> In summary, the salient points from the findings of this practice-based research work – to replicate traditional Bedouin weaving in a modern setting – are as follows. The woven sleeping bag was successful on two levels: as a practical utility and as a work of art. The material and skills used remained true, although a tapestry loom was used instead of a traditional Bedouin ground loom, resulting in a travelling utility item that, with its strong horizontals and earthy red colours and traditional tassels, held aesthetic appeal. However, practical considerations, particularly time and weight constraints, forced changes to design. For example, the level of ornamentation had to be stripped back to exclude shells and coins. The focus group concentrated on design rather than function, praising the artistic skills used and the aesthetic results. Only once the nature of Bedouin weaving was explained did they begin to see the artefact as both an art piece and a utility item. As a result, the artist will ensure that a brief commentary on the practical purpose of Bedouin weaving will be displayed alongside the woven sleeping bag in future exhibitions.

Alternatively, if word count is an issue, you can leave the summary to your concluding chapter where you have to tie everything together anyway.

Everything you do in your dissertation leads to your concluding chapter wherein you collate your work, underline your main conclusions and, based on these, either highlight the implications of your work or emphasise lessons learned or make recommendations, or any combination thereof. This means that your concluding chapter is a crucial one because it is where you capture the essence of your research output, achieving what supervisors call 'cyclical closure'. So do not dismiss the up-coming final chapter lightly: it is a critical part of your dissertation.

Checklist

Writing up your findings

1 Worked out your *structure* ✔
2 Used a helpful *heading* ✔
3 *Introduced* your chapter ✔
4 *Described* your data ✔
5 *Analysed* your data ✔
6 *Synthesised* the results with the Literature Review/Contextual Review findings ✔
7 *Summarised* key points (optional) ✔

Further reading

Gibbs, G. (2018) *Analysing qualitative data*. 2nd edn. London: Sage.
Harding, J. (2018) *Qualitative data analysis: from start to finish*. 2nd edn. London: Sage.
Miles, M. B., Huberman, A. M. and Saldana, J. M. (2019) *Qualitative data analysis: a methods sourcebook*. 4th edn. London: Sage.
Pallant, J. (2020) *SPSS survival manual: a step by step guide to data analysis using IBM SPSS*. 7th edn. London: Open University Press.

Summary of key points

- Create an appropriate chapter *heading* identifying the nature of your research: 'Case Study Findings: Description, Analysis and Synthesis' or 'Survey Findings: Description, Analysis and Synthesis' or 'Findings: Woven Sleeping Bag' or 'Findings: Musical Score', etc.
- Write a brief *introduction*. Identify the relevant research objective(s), your data collection sources and methods, and describe how you will analyse your findings. Include useful information to place your findings in context.
- If engaged in writing a *traditional dissertation*: present your empirical data in an incremental way, using the process of description-analysis-synthesis, to achieve a rich picture.
- *Description* is a simple process, entailing the basic reporting of empirical results (who said what, etc.).
- *Analysis* is intelligent commentary on the aforementioned descriptions.
- *Synthesis* occurs when you compare and contrast your empirical findings against your Literature Review findings, or their equivalent (e.g. Contextual Review).
- If engaged in writing a *practice-based dissertation* where an art work of some kind is created: give your views on your 'artefact', reflect on how others see it (if there are others), and place both perspectives in relation to your Contextual Review (or Literature Review), making use of reflection-**in**-action and reflection-**on**-action logs as appropriate. The process of building up a rich picture of your findings through *description-analysis-synthesis* still applies.
- A *summary* of your findings requires a summative statement on each core subsection, either in the form of a single paragraph or a bullet-point list. You can leave the summary until your concluding chapter if you wish.

Chapter 9



Concluding your dissertation

• What is in a Conclusion? • Introduction • Research objectives: summary of findings and conclusions • Recommendations or implications or lessons learned • Contribution to knowledge • Self-reflection • The viva • Checklist • Summary of key points

This chapter demonstrates, through example, the art of achieving *cyclical closure* in your dissertation.

What is in a Conclusion?

Cyclical closure is where you metaphorically wrap up your work in a nice big bow. There is a technique to achieving cyclical closure which this chapter will now take you through.

By this stage you are probably mentally exhausted and sick of the sight of your dissertation. Besides, you may have exams to concentrate on or holidays to arrange or employment opportunities to explore. Reject the temptation, however appealing, to scribble down a quick ending to allow you to submit your work and finally see the back of it. It is at this stage when you need to make a final push and finish with a flourish. If your concluding chapter is epitomised by unstructured and ill-disciplined rambling, then you will leave your dissertation marker with the clear impression that you lacked the necessary skills to compose an acceptable Conclusion and/or you lost interest in your own work. A Conclusion is the final big piece of the dissertation jigsaw and your supervisor/marker is expecting it to contain certain things. So, don't disappoint.

What's in a Conclusion? Quite a lot, actually! Assuming that your concluding chapter is Chapter 5 (after Introduction, Literature Review, Research Methods and Findings), here is what is expected, as a minimum, in your Conclusion:

5 Conclusion
- 5.1 Research objectives: summary of findings and conclusions
- 5.2 Recommendations (or implications or lessons learned)

If you omit either of these elements, then you are missing out on potential marks. If, in the Conclusion, a student has not summarised the work or arrived at an informed conclusion or outlined a way forward (or, alternatively, discussed the implications of their work or indicated lessons learned), then substantial marks will be lost. So include these things and avoid throwing away easy marks. Doing so shows discipline and a structured mind, i.e. a research-based approach to rounding off your dissertation.

One other point: for most postgraduate dissertations you are not expected to contribute *new knowledge*, so you can normally omit this requirement. The exception is the PhD. For PhD students (a route you may wish to take after your Master's), an acceptable structure for a Conclusion could be:

5 Conclusion
- 5.1 Research objectives: summary of findings and conclusions
- 5.2 Recommendations (or implications or lessons learned)
- 5.3 Contribution to knowledge

Although the subsection *Contribution to knowledge* is directed at those students studying for a PhD, it may be that, even as a Master's student, you have indeed produced new knowledge, in which case by all means include this subsection highlighting your contribution.

Additionally, regardless of the type and level of dissertation, inserting a subsection on self-reflection adds a little something different to a dissertation. As with most chapters in your dissertation, you should begin with a short introduction. A solid structure for a dissertation might therefore look like this:

5 Conclusion
- 5.1 Introduction
- 5.2 Research objectives: summary of findings and conclusions
- 5.3 Recommendations (or implications or lessons learned)
- 5.4 Contribution to knowledge (optional)
- 5.5 Self-reflection

If you did not cover the limitations of your work in your Research Methods chapter, then you can include it here, giving you a comprehensive concluding chapter, resulting in:

5 Conclusion
- 5.1 Introduction
- 5.2 Research objectives: summary of findings and conclusions
- 5.3 Recommendations (or implications or lessons learned)
- 5.4 Contribution to knowledge (optional)
- 5.5 Limitations
- 5.6 Self-reflection

Alternatively, you can embed limitations in either subsection 5.2 'Research Objectives: Summary of Findings and Conclusions' or subsection 5.3 'Recommendations'. It is also acceptable to combine some of the above subsections (e.g. 'Conclusions and Recommendations', 'Contribution to Knowledge and Self-Reflection'), particularly if you are running close to your dissertation word limit. Very often it is just a matter of personal choice. Advice is now offered on how to write up each of these subsections. The subsection 'Limitations' was covered in Chapter 7, 'Research Methods', so will not be covered here in any great depth.

Introduction

Prior to summarising your findings, it is good practice to present a brief introduction at the start of your Conclusion. Keep things simple, using matter-of-fact language. To begin with, remind the reader of your overall research aim, together with the individual objectives that you set out to meet in order to achieve your overall research aim: 'The overall aim of this research was to advance an understanding of . . . The specific research objectives were . . .'. Then list your objectives. For example:

> The overall aim of this research was to advance an understanding of e-Learning in the university environment, particularly in relation to academic staff preparation issues. The research objectives were, within the specific context of higher education, to do the following:
>
> 1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
> 2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
> 3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
> 4 *Formulate* recommendations on staff preparation issues.

Next, state the topics that your Conclusion will cover. You are not expected to discuss the topics at this stage. Just let the reader know what they are, for example:

> This concluding chapter will revisit the research objectives above, summarise the findings, and offer specific conclusions in relation to each stated research objective. Importantly, the contribution of this research to the development of e-Learning will be clarified. The dissertation will end with a personal reflection on the dissertation journey undertaken. By adopting this rounded approach the researcher aims to achieve cyclical closure.

Now to the main focus of your concluding chapter.

Research objectives: summary of findings and conclusions

In this part, all that is required is that you answer two straightforward questions:

1 As a result of your Literature Review (or equivalent) *and* empirical research (if you did both), what did you find out in relation to your individual research objectives?
2 What conclusions have you come to?

You do not need to go through all the swirling and interlinking analysis that you went through in the Literature/Contextual Review and write-up of your empirical data. No, at this stage of your dissertation you can put aside your debating skills. Information rather than persuasion is the goal of your concluding chapter: you are simply *informing* – rather than *persuading* – the reader about your summary findings and main conclusions.

Think of the 'conclusions' you make as big points you wish the reader to take away about the findings *for each of your research objectives*. So, when you write about what you found out for your first research objective, you then make a *key point*, or two, that captures what your findings are telling you in relation to that research objective. You then approach your other research objectives in the same way: summarise your findings for each objective, ending each time with a key point, or two, about those findings. Your structure for the subsection 'Research Objectives: Summary of Findings and Conclusions' could take the following shape:

Research Objective 1
Summary of Findings
Conclusion

Research Objective 2
Summary of Findings
Conclusion
Research Objective 3
Summary of Findings
Conclusion
Etc.

For example, if you were the researcher involved in the e-Learning example,

- Did you 'identify the forces driving e-Learning and barriers to the successful delivery of e-Learning programmes' (objective 1) from your Literature Review and your empirical work and what big point(s) do you wish to make?
- What did your Literature Review and empirical study tell you about 'models and frameworks relevant to supporting academic staff in coping with e-Learning' (objective 2) and what big point(s) do you wish to make?
- Similarly, in summary, what were the 'staff stakeholder views and practices related to e-Learning' (objective 3) and what big point(s) do you wish to make?

If you have a research objective that is phrased in terms of making recommendations or highlighting the implications or lessons learned as a result of your work, as in objective 4 of the e-Learning example ('formulate recommendations on staff preparation issues'), then this objective would be addressed when you get to the Recommendations (or Implications or Lessons Learned) subsection within your Conclusion chapter.

As described above, a convenient way to tackle your summary is to create separate headings under 'Research Objectives: Summary of Findings and Conclusions' that cover each of your individual research objectives, and under each heading summarise what you found out related to that research objective, ending with a relevant conclusion. Such a structure, related to the e-Learning example, might appear as shown in 5.2.1, 5.2.2, and 5.2.3 below:

5 Conclusion
5.1 Introduction
5.2 Research objectives: summary of findings and conclusions
5.2.1 Research Objective 1: e-Learning Drivers and Barriers
Summary
Conclusion
5.2.2 Research Objective 2: Models and Frameworks
Summary
Conclusion
5.2.3 Research Objective 3: Staff Stakeholder Views and Practices
Summary
Conclusion
5.3 Recommendations (or implications or lessons learned)

5.4 Contribution to knowledge (optional)
5.5 Self-reflection

Fleshing out research objective 1 above, to illustrate the structure in practice:

5.2 Research objectives: summary of findings and conclusions
5.2.1 Research Objective 1: e-Learning Drivers and Barriers

Summary: Drivers
The literature identified the main drivers for universities becoming involved in e-Learning: external pressures from government to accommodate greater student numbers; wider access; flexible delivery; competition; access to global markets; prudent use of resources; and because of assumed inherent benefits to staff and students.

Yet, the empirical study showed that, in practice, the picture was not so clear-cut. Those in charge of shaping e-Learning in an institution (elite staff) may not have a firm collective view of why they are introducing e-Learning, other than to be viewed as 'modern' by potential students and to be different from their competitors; and that academic staff may hold an erroneous view of why their institution is pushing e-Learning (as a cost-cutting exercise, a view the elite staff were at pains to dismiss). Such misunderstandings may be complicated further by imperatives to integrate e-Learning into teaching environments without the rationale being discussed with, or explained to, academic staff, as in this case study.

Continuing with:

In the case study, the elite staff held that the main benefit of e-Learning to academic staff was the opportunity for them to become reflective practitioners, whereas academic staff either did not see any benefits for them or were concerned or cautious. Both sets of staff identified similar benefits of e-Learning to students (flexible access), but academic staff were not convinced that these benefits would materialise.

In terms of drivers for, and benefits of, e-Learning, it is clear that a major discrepancy can occur between theory and practice, and between different stakeholders, with elite stakeholders having a positive view of the impact of e-Learning, and those who have to implement e-Learning, academic staff, having a cynical view of elite stakeholder intentions.

Concluding with:

Conclusion 1
A lack of communication is therefore at the heart of much of the confused picture for the reason behind why an institution wishes to integrate

e-Learning into their environment and the perceived benefits to the different stakeholders.

Followed by your findings on the barriers to e-Learning:

> **Summary: Barriers**
> The Literature Review highlighted many barriers that can impede e-Learning initiatives, ranging from fear of high costly failure, to inadequate IT infrastructure, opposition to distance learning through globalisation, job insecurity, intellectual property rights, and perceived poor progression rates, but the main barrier identified in the literature was a lack of pedagogical training for academic staff.
>
> In the case study, the main barriers hindering academic staff becoming involved in e-Learning were inadequate training in e-Learning *and* lack of time. Although the academic staff in the study contributed to a blended e-Learning environment, staff knowledge and expertise depended on enthusiasts, rather than a coherent training programme. Other discouraging factors included: the compulsory manner in which e-Learning was implemented, suspicion over management intentions, and lack of confidence in IT support. However, a crucial factor in preventing staff enthusiasm for, and involvement in, e-learning was the expectation that staff would engage in e-learning initiatives in parallel with mainstream duties – teaching, marking, supervision, research, attending committees, etc. – without a reduction in their timetables commensurate with their workload.

Concluding with:

> **Conclusion 2**
> The two main barriers hindering academic staff in meaningful and voluntary involvement in e-Learning programmes are a lack of pedagogical training in e-Learning and a lack of time to learn about e-Learning (and prepare associated teaching material).

You would then repeat the above process for each of the above research objectives (highlighted in bold below): summarise the Literature Review findings and the empirical research, ending, in each case, with a conclusion (or conclusions, as in the above example).

5.2 Research objectives: summary of findings and conclusions
- 5.2.1 Research Objective 1: e-Learning Drivers and Barriers
  - Summary
  - Conclusion
- **5.2.2 Research Objective 2: Models and Frameworks**
  - **Summary**
  - **Conclusion**

5.2.3 Research Objective 3: Staff Stakeholder Views and Practices
Summary
Conclusion

5.3 Recommendations (or implications or lessons learned)
5.4 Contribution to knowledge (optional)
5.5 Self-reflection

In your own research you can, if you wish, provide an additional (overarching) summary statement, a final paragraph in your subsection 'Research Findings: Summary of Findings and Conclusions' that looks at your work in the round. Or you may introduce an unexpected conclusion, something that you did not set out to study but which became apparent during your research:

> There is one other, unexpected, conclusion that this research work has uncovered, and that is that although there is no agreed definition of e-Learning among e-Learning gurus, nonetheless the absence of one at a local, institutional level is a hindrance to meaningful discussion of e-Learning itself. The Literature Review showed that e-Learning definitions varied widely, that there was no consistent definition and that some prominent figures in e-Learning concluded that any attempt to provide an absolute definition was an impossible task ('herding cats', 'comparing apples to oranges', etc.). This may be true but during the case study staff were repeatedly peppering their responses with phrases such as 'well, depends on what you mean by e-Learning'. This suggests that a lack of a definition of e-Learning may present an initial barrier to progressing discussions about e-Learning, and that definitions are not abstract, academic activities unrelated to practical concerns. The actual definition of e-Learning that an institution decides upon may not be important, but that one is required is evidenced from this study.

Or you may take the occasion to remind the reader that your research, although solid, has some limitations and that your work has to be placed in this context:

> The conclusions have to be viewed in terms of a caveat. The conclusions are based on an extensive review of related literature and a case study, which means that the conclusions are linked to these two sources only. One is not generalising that what was concluded in this research automatically applies to all other institutions in higher education. Instead, this research is appealing to the concept of *relatability*: that what was researched in this study will be of interest to other researchers and institutions interested in e-Learning and that it will add, incrementally, to the patchwork of research in e-Learning.

Ending with:

> Another limitation is that student perspectives on e-Learning have not been explored. Such empirical data would have added further richness to

the study, but this would have compromised the focus of the research and perhaps made the burden of work unmanageable (the decision to include so many elite staff, although of enormous benefit to the study, did dramatically increase the workload).

One last point. Avoid stating that you have 'proved' something. It is very rare for research to prove anything. By all means emphasise that you have provided strong evidence in support of a thesis but don't go overboard and undermine your good work by over-egging your results. Let's now look at what you can do with your conclusions.

Recommendations or implications or lessons learned

Normally your supervisor will want to know what recommendations you are making as a result of your research work. Not all dissertations end with recommendations, though. It might be that you want to discuss the implications of your work instead, e.g. for government policy or a company's HR department or for healthcare workers in rural communities. Then again, you may wish to highlight lessons learned in your study, particularly if you implemented practice-based research. Any lessons learned are about the subject under study, e.g. how to prepare academic staff for e-Learning, not about your personal dissertation journey (that can come under the subsection Self-Reflection).

If you omit this subsection in your concluding chapter, then you may be in danger of losing marks. Having said that, some institutions do not require their dissertation students to make recommendations or discuss implications or highlight lessons learned in relation to their research findings, so check with your institution's regulations and your supervisor on whether or not you are required to do so.

The process is the same regardless if you want to focus on recommendations or implications or lessons learned. Just as your conclusions are derived from the findings for each research objective, so your recommendations/implications/lessons learned each come from your conclusions (Figure 9.1).

Let's assume that you wish to make recommendations as a result of your findings. There are two types of recommendations that you can make: recommendations specific to the evidence presented in your study; and suggestions for future research. The former is expected, the latter is optional. If your dissertation was on how governments make the decision to go to war with other countries and that your work concluded – based on a case study of the UK and the 2003 invasion of Iraq – that there was scant regard both to democratic process and the need for concrete evidence of the case for war, then you might

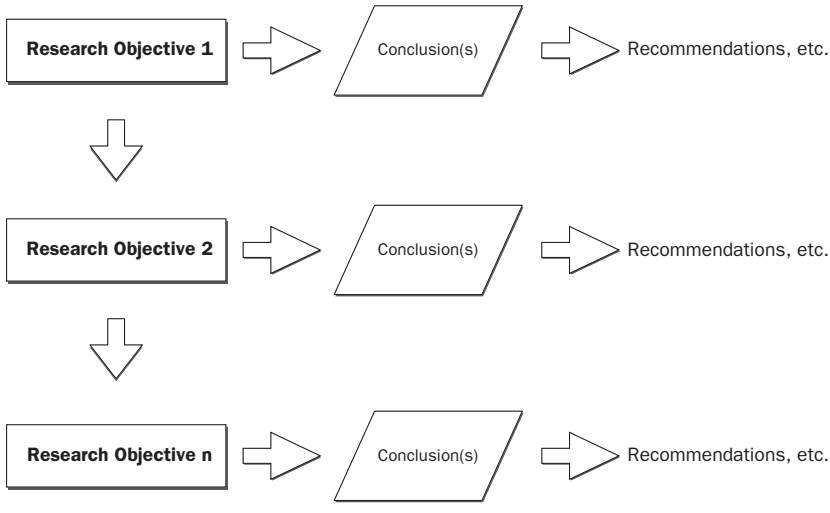


Figure 9.1 From research objectives to recommendations etc.

recommend that, in the future, procedures are in place to ensure Parliament has a crucial role to play before war is declared and that part of that process necessarily involves the independent collection and analysis of any data related to such a decision. In terms of future research, you might propose that other researchers examine why some countries, under the same pressures, decide not to go to war.

! A common mistake

A common mistake by students is to hide their recommendations (or implications or lessons learned) by embedding them in a sentence or two within an obscure paragraph. If the marker has to look hard to find them, then you are at risk of losing marks. Either devote an obvious collection of paragraphs to the task or have an appropriately headed subsection. Remember, though, if one of your research objectives referred explicitly to making recommendations, etc., as in objective 4 of the e-Learning example case study ('Formulate recommendations on staff preparation issues'), then it is best that you assign a properly headed subsection to that task.

Similarly, if one wished to make recommendations based on the e-Learning case study, then one would look to see what conclusions were made for each of the research objectives, and then write recommendations specific to those individual research objective conclusions. Looking at the conclusion for objective 1 of the e-Learning example case study, related recommendations could develop as follows:

> Conclusion 1 stated that a lack of communication is at the heart of much of the confused picture for the reason behind why an institution wishes to integrate e-Learning into their environment and the perceived benefits to the different stakeholders. From Conclusion 1, the first recommendation to be made is that elite staff should be aware of why they are introducing e-Learning, the external factors influencing their university's decision to engage in e-Learning, the benefits to staff and students, and, importantly, the need to ensure that the e-Learning strategy is clear, justified (in terms of rationale) and communicated to those charged with integrating e-Learning into the teaching and learning environment, i.e. academic staff.

Also, try to explain the benefits of your recommendation(s), i.e. do not just present the reader with an unexplained recommendation (or list), unless you feel that what you are recommending is blatantly obvious and requires no explanation. Explaining the above recommendation:

> This recommendation would have a number of benefits. First, elite staff themselves would understand collectively why e-Learning is important to the university and what the benefits are to the institution as a whole, as well as to staff and students, and so they would be in a much better position to win staff 'buy-in'. Communicating the rationale – whatever it turns out to be – to academic staff would remove any misunderstandings of university intentions and may help avoid cynical guesswork.
>
> Further, a university's e-Learning strategy should be clearly headed and be easy to find (whether it be on a website, or contained in university strategic planning documents) and not buried under obscure objectives such as, for example, 'Campus Development'. In effect, e-Learning strategy, rationale and benefits should be visible and communicated to management and teaching staff.

You are entitled to group recommendations together, as follows:

> From Conclusions 2 and 3 – related to shortfalls in pedagogical training – it is recommended that academic staff receive meaningful pedagogical training, in a structured way, that is aimed specifically at preparing academic staff for integrating e-Learning into their teaching, covering the following topics: benefits of e-Learning, practical advice on the changing role of staff and students, including supporting infrastructures and guidance on what works and what does not.

Where possible, try and show your recommendations diagrammatically. Do not neglect to explain your diagram (a common failing by students). For example:

> The recommendations are diagrammatically represented in Figure 9.2. First, a university should develop its e-Learning strategy. This strategy should be readily accessible to staff, supported by a local definition of the term e-Learning, details of the approach to be adopted (e.g. voluntary, blended, etc.), including a rationale of why the university wishes to become involved in e-Learning. Next, this strategy should be communicated to all elite staff with a part to play in shaping the direction of e-Learning. Then, the strategy should be communicated to academic staff. Following that, academic staff should receive training on e-Learning.
>
> This research identified two types of training necessary to prepare academic staff for e-Learning: technical training (to cope with the software platform to be used, as well as to cover necessary computer skills), and training on e-Learning pedagogy. There was a great deal of evidence to show that technical training predominated to the detriment of pedagogical. That imbalance needs to be addressed. Staff should also be given time to engage in e-Learning activities.

The above recommendations are examples of the first type of recommendation, ones that originate from your specific research findings. Remember that

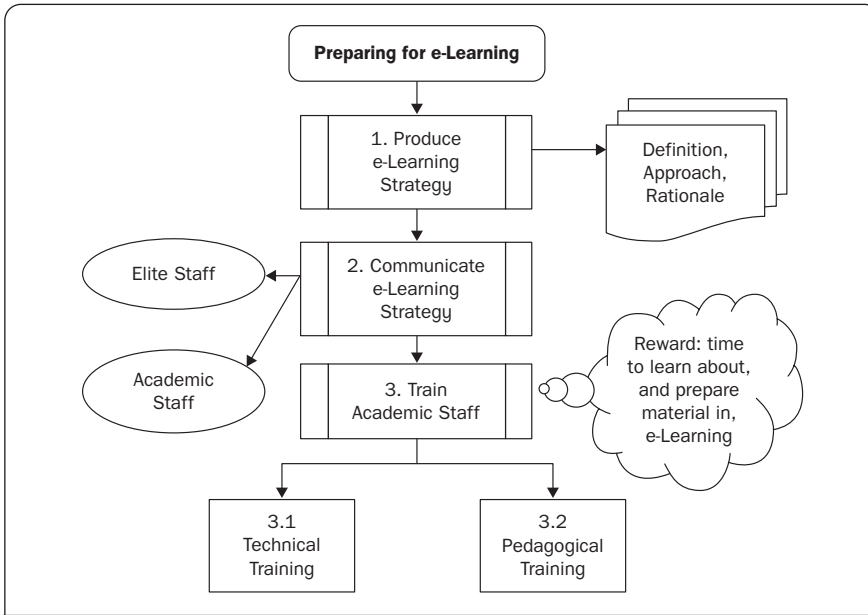


Figure 9.2 e-Learning preparation model

you can also make more general recommendations, based on possible avenues for future research. To help you handle this type of recommendation, ask yourself the question: 'If I had to recommend to someone else – another student – who was interested in picking up where I left off, how would I advise that student on how to progress my work?' You do not need to go into convoluted detail for this type of recommendation, just a sentence or two might suffice, for example:

> Although thorough research has been conducted for this dissertation, there are other related areas of study that could aid our understanding of cybercrime [if that was your dissertation area]. For example, further research could focus on areas that were touched on only briefly in this dissertation, such as legislative or technological developments in the context of cybercrime . . .

Finally, you might want to offer advice on how to implement your specific recommendations, although that is rarely required in your dissertation but can pop up as a viva question:

> Another recommendation concerns the implementation of the proposed e-Learning preparation model. The culture of an organisation can impact on staff development and on how a model can be received. For example, this study illustrated that some teaching staff were resistant to change, others were amenable, whereas others, still, were cynical but interested in e-Learning. Similarly, senior staff exhibited different types of traits towards staff development: for example, some held the view that it was part of the tutor's job to engage in e-Learning and that a tutor should not be rewarded for doing so, while others believed that staff should be rewarded.
>
> To offer an improved chance of the model being adopted successfully, it would be fruitful to revisit the university under study and, applying a framework of organisational behaviour, try and determine the detail of the various cultures in operation at Inverclyde University. A formal understanding of the culture (or cultures) of an institution through the deliberate mapping of cultural traits against a credible behavioural framework would allow the proposed model to be implemented in a way that was appropriate to different cultures within a university.

To reflect the importance of making recommendations or implications or lessons learned in a Master's dissertation, students often alter the title of their final chapter accordingly, with '(s)' added or removed depending on whether or not you are writing in the plural or singular:

- Conclusion(s) and Recommendation(s)
- Conclusion(s) and Implication(s)
- Conclusion(s) and Lesson(s) Learned

Regardless of the title of your concluding chapter, central to a praiseworthy subsection on recommendations, etc. are a number of elements, namely:

- Base your recommendations/implications/lessons learned on your research conclusions.
- Explain those recommendations/implications/lessons learned.
- Present them diagrammatically, where convenient.
- If making recommendations, provide some guidance on how to implement them.

> **! A common mistake**
>
> A common mistake by students is to produce recommendations or implications or lessons learned 'out of the blue', i.e. with no or little obvious link to the research conclusions. If you follow the aforementioned advice, you should avoid that mistake.

Contribution to knowledge

It is rare for MSc students to indicate their contribution to knowledge. That task is normally reserved for PhD students. Nonetheless, if you feel that your work is significant, then by all means blow your own trumpet.

What does 'contribution to knowledge' mean? Implicit is the idea that you are required to make an *original* contribution to knowledge, that there is something unique about aspects of your work, either what you studied, or how you researched something, or the specific problems that you addressed, or the angle from which you approached a subject area, or the light that you have shed on a subject, and so on. Doing the same research, in the same way, and coming to the same conclusions as others is unlikely to be viewed as making an (original) contribution to knowledge.

However, it is almost impossible to produce *completely* unique research. In some way, however distant, original work owes much to what has gone before. Even Albert Einstein's work on relativity was built on the shoulders of giants. Do not panic that you might be expected to invent a new branch of physics or emerge with the meaning of life. Here lies the clue to managing your approach to writing about your contribution to knowledge: articulate how your research compares and contrasts with research done by others in your field, eliciting what is *different* about your work.

Be bold. Do not try and avoid the issue of your contribution. Be confident. Meet the matter head on: 'How has this research work contributed to knowledge? In terms of . . .'. There are two areas where you can look for an original contribution to knowledge: in your Literature/Contextual Review and in your empirical research. For example, if in your Literature/Contextual Review you

explored a facet of an important subject area that had hitherto been neglected or treated superficially, or erroneously, and your detailed study of secondary sources revealed new insights, then you can claim to have made an original contribution to knowledge. In which case, say so:

> The review of literature made it clear that e-Learning usage is fragmentary in the world of education and that there is an acute lack of in-depth research of e-Learning practices. This study has redressed that anomaly in a number of valuable ways. First, the review of literature provides a critical investigation of e-Learning theory pertinent to institutions, dovetailing into a critique of guidelines and frameworks as they relate to preparing academic staff for e-Learning. Knowledge derived from this review of literature can educate and further inform debate on the drivers and barriers to becoming involved in e-Learning (too often, literature uncritically lists drivers and barriers, failing to give a more rounded, research-based picture). Second, . . .

Your main contribution to knowledge, however, probably lies in your empirical work. It is less common, although not unheard of, for the Literature/Contextual Review to be the principal source of an original contribution. If your experiment/survey/case study/action research, etc. is unique, then you could be making an original contribution to knowledge.

Even if you do the same type of study as someone else, you still might be making an original contribution to knowledge. For example, suppose that a previous researcher implemented a survey looking at student debt. Suppose, further, that the study was done in the USA. You decide to use the same, or very similar, survey questions, but your target population is UK students. Your work compares and contrasts the two sets of results, producing new knowledge.

At a simple level, even if you think up, for example, a case study from scratch, designing your own questions and selecting a specific target population, then it is statistically unlikely that someone else has carried out the *exact* same study as you. So, if your empirical work is unique, then say why that is the case, as in the following example:

> The empirical research work is unique: no other researcher has carried out a study of such depth and range within an institution such as Inverclyde University, covering so many inter-related themes, interviewing academic staff on e-Learning preparation issues and elite staff on strategic e-Learning issues, resulting in a coherent picture, that was previously patchy, on issues surrounding drivers and barriers to e-Learning.

One other source of evidence to support your 'contribution to knowledge', other than your Literature/Contextual Review and your actual practical work, can be found in your recommendations or the implications of your findings, etc. For instance, it is likely that your recommendations contain proposals that are different in some respects from what has been produced before. If, for example,

you have developed some sort of model or paradigm which you believe, if implemented, can resolve a problem that you identified earlier, then your model/paradigm itself becomes part of your original contribution to knowledge. For instance, the e-Learning Preparation Model encapsulated in Figure 9.2 above could be argued as making an important contribution to knowledge:

> The specific e-Learning Preparation Model produced at the end of this research encapsulates what needs to be done to encourage academic staff to engage meaningfully with e-Learning initiatives, ranging from the need to develop an e-Learning strategy that is clear, defines e-Learning, and justifies the rationale for introducing e-Learning and the approach adopted, to the communication of this strategy to elite staff and academic staff, and the crucial importance of pedagogical training on specific areas. In effect, a collective framework has been created that is specifically devoted to e-Learning preparation and based on in-depth research. This has been a highly successful piece of research with many points of learning for both theory into practice and practice into theory, resulting in a significant contribution to knowledge.

An obvious way to show your contribution to knowledge is to identify what other researchers have done and how your work builds on theirs, but importantly in what respects your work differs:

> How has this research made a contribution to knowledge? To date, the work produced by other researchers has concentrated on . . . This research, on the other hand, differs in the following respects . . . The importance of this work, compared to what has been produced hitherto, lies in . . .

Finally, if you have published aspects of your research in journals or conference proceedings, then that in itself can support the claim that you are making a contribution to knowledge:

> Furthermore, research publications produced as a result of this research have contributed to the field of e-Learning in that the opportunity to publish and discuss e-Learning issues with one's peers has not only engendered fruitful debate but also allowed other researchers to have access to the results of this research deemed by conference committees as making a contribution to the e-Learning academic community. These publications are listed below . . .

As you can see, the question of how to cope with writing about your contribution to knowledge is not as problematic as it first appears. In short, think in terms of the contribution made by your Literature Review and/or your empirical study; and if you have publications to boast of, then your work has already achieved academic recognition!

One last piece of advice. While you are warned not to over-egg your contribution, the truth is that most students are too modest about their work. Too often, students are reluctant to boast about their work and it is common for supervisors to read concluding chapters that are reticent in expressing what has been achieved. The results are understated, offering tentative concluding remarks. Students, even though they produce good work, are still disinclined to express their contribution in positive terms. Sometimes they think it is ridiculous, or embarrassing, or even ill-mannered, to praise oneself, and so they underplay their achievements. You are not expected to engage in an unseemly paroxysm of self-eulogy, but you can, and ought to, assert and defend your good work with confidence.

Self-reflection

Self-reflection is a form of *reflection-**on**-action*, i.e. your thoughts on something you completed. In this case, your dissertation journey.

In the first instance, create a subsection titled 'Self-reflection'. If you are running close to your word-limit, and the subsection on self-reflection is not compulsory, then you can be clever and include it as an appendix (anything in an appendix is not normally included in the word count). Make sure that you let the reader know where to find your self-reflection (e.g. 'Appendix H Self-Reflection contains a personal narrative on the dissertation journey').

How do you reflect upon an activity that has become an integral part of your life? Throughout the life cycle of your dissertation, from submitting your proposal to writing your concluding chapter, a wide range of conflicting emotions have been experienced: the excitement of starting a large research project; angst at trying to get a handle on your subject area; delight at reading the work of other, more experienced, researchers; confusion over the plethora of material; frustration at following blind leads; satisfaction in structuring one's own thoughts and arguments; the pain of having to remove work that is, on hindsight, not relevant; and relief in completing the concluding chapter.

Panic, pride, tedium, exhilaration . . . there are many words that could be used in equal measure to convey the feelings that you will have experienced in undertaking your dissertation. Of more practical benefit may be the need to reflect on points of learning and what advice you would give to other students. Be honest (but fair to yourself and others), or there is no point in the exercise. For instance, if your work started badly, then say so, explaining why:

> This research work started badly. The (first) research topic was e-Learning and Knowledge Management, with a vague idea of some sort of connection between the two, and an ill-defined view that managing knowledge in e-Learning was problematic. A full chapter was then written, comparing how Knowledge Management researchers define knowledge against how philosophers down the ages (such as Descartes and Locke) defined knowledge. However, the overall area of study lacked adequate focus

> and was approached with little enthusiasm. As a result, this work was abandoned and a new research topic started from scratch.

Do not forget to offer advice to future students:

> The first piece of advice would be to select a topic that genuinely interests you. This researcher's academic interests have deep roots in education. E-Learning is an area that will have a huge impact on teaching. Bringing together an interest in teaching with research on e-Learning was an exciting prospect. Accordingly, the research focus was changed to accommodate a genuine interest in teaching, rather than what initially seemed clever and innovative.

The above scenario highlights a common student scenario: an initial failure to find a research topic. Another big problem area for students tends to be the chapter on research methods. For many students it is such a difficult part of the dissertation to comprehend, yet it is so pivotal to their empirical work. Sometimes the problem lies in the concepts used in the teaching of research methods, where terms such as 'phenomenology', 'positivism', 'ontological' are so abstract that they can confuse students; or perhaps there is a problem deciding whether or not the approach you are taking to collect and analyse your data is indeed the right one for your research, as discussed below:

> The Research Methods chapter was, initially, unbalanced in that it was biased towards providing details on how the research would be implemented with little attempt at justifying the choices made. There needs to be a balance, but in the initial Research Methods chapter this was missing. That imbalance was corrected, with choices explained and justified.

Once again, offering advice as a result of your experience:

> Sometimes the researcher can be too close to their work and so fail to notice obvious deficiencies. Listen to your supervisor! A trick suggested, which worked, was to have a few days break, return to the work, but select a page at random and try to determine how one could justify what was written, and work backwards to see if indeed that is how you approached the discussion related to the selected text. Not all the research work relates to justification of arguments, but nevertheless such an exercise does prove interesting, if only to improve the flow of what is written.

It is good to warn students that research is not a smooth, seamless activity, that things can and do go wrong:

> The case study required careful planning, not only in working out the thematic structure of the interviews (based on issues from the Literature Review) and the questions to ask within those themes, but also in terms of how to analyse the data. Despite such planning, one has to be prepared

> for hiccups. For example, during the transcription process it was discovered that part of a respondent's replies to a number of interview questions were missing from the recording. During the interview the recording device had stopped and this had gone unnoticed. One has to admit the mistake and simply re-do that part of the interview.

Similarly, a dissertation does not always follow an uninterrupted linear path, where the Introduction is completed to order, followed by the Literature/Contextual Review, then the Research Methods, etc. The reality is that the stages of the dissertation tend to be undertaken in an iterative fashion, even within the one subsection, as detailed in the following narrative:

> When writing about barriers to e-Learning, one would discover an interesting article that was relevant to the section on e-Learning definitions, and so serious consideration would be given to revisiting that earlier section, even if the research work was at an advanced stage or one had believed that an earlier section was complete. This was time-consuming, and in some cases led to much re-thinking, but it was beneficial and gave a freshness to the work, making it as up-to-date as possible.

You can also let others know what worked well. For example:

> The analytical structure that was decided beforehand – deal with academic staff first, compare their answers against each other, deal with elite staff next, compare their answers against each other, then compare elite responses against academic staff responses, then compare and contrast both sets against the findings from the review of literature – forced the researcher to concentrate on processes rather than people, which not only helped enormously when it came to the write-up, but also helped to minimise potential bias when it came to interviewing people whom the interviewer knew.

It is up to you how to structure this subsection and what to write about. Keep it simple and give helpful advice to others who can learn from your experience. Reflecting on your own dissertation journey will also help you become aware of your own academic development and ability to see a long and demanding project to conclusion. Students are always surprised when they think back to their first tentative steps and then look at the highly polished piece of research they have just completed.

Research is a discipline, but one that should be done with genuine conviction in an area that is of interest to you. Writing a dissertation is a demanding intellectual odyssey, but it should also be an enjoyable experience. If there is one concluding piece of advice that one can give to those contemplating a similar research journey, it is that there is no royal road to research. It takes hard work, and a disciplined mind, but the finished product is something to reflect on with real pride.

The viva

If you are lucky, once you write and hand in your dissertation to be marked, your part in the dissertation process will be over. On the other hand, some institutions also subject their students to an oral examination of their submitted dissertation, i.e. a *viva*. A viva can be a nerve-wracking experience, but, believe it or not, it can also be an enjoyable one. If you are well prepared beforehand, then, nerves notwithstanding, you ought to be looking forward to the experience so that you can show the examiners the fruits of your labour, something that you should take pride in and be prepared to defend. Appendix Q contains notes on the things that you can do to improve your performance and increase the chances of a successful viva.

Now that you know how to write your concluding chapter, there is one small compulsory writing task that still awaits you – your *abstract*. This is covered in Chapter 10.

Checklist

Concluding your dissertation

1 Wrote the *introduction* ✓
2 Summarised findings and conclusions for each *research objective* ✓
3 Identified *recommendations* or *implications* or *lessons learned* ✓
4 Stated your *contribution to knowledge* (optional) ✓
5 *Reflected* on your dissertation journey (optional) ✓

Summary of key points

- In the *Introduction*, refresh the reader's memory about your research objectives and give a quick run-down on the content of your concluding chapter.
- In *Research Objectives: Summary of Findings and Conclusions*, answer the following questions: 'As a result of your Literature Review/Contextual and empirical research (if you did both), what did you find out in relation to your individual research objectives?' and 'What conclusions have you come to?' That is, for each research objective, inform the reader of your summary findings and offer a view on what your research is telling you.
- If making *recommendations*, then there are two types of recommendations to consider: recommendations linked to your conclusions and suggestions for future research.
- Normally it is not a requirement that Master's students make a *contribution* to knowledge. However, if it is, or if you want to do so regardless, then insert a subsection in your concluding chapter entitled Contribution to Knowledge and consider your contribution in light of your Literature/Contextual Review findings and as a result of your empirical work.
- In *reflecting* on your dissertation journey, then do so in terms of learning points and the advice that you would give to other students about to start their dissertation.

Chapter **10**



Writing the abstract

• What is an abstract? • How to write an abstract • Abstract template
• Checklist • Summary of key points

This chapter teaches you how to write an abstract. The elements that an abstract ought to contain are highlighted through examples of good and bad practice.

What is an abstract?

Postgraduate students are normally required to include an *abstract* in their dissertation. An abstract is essentially a *synopsis* of your work. If an abstract is mandatory, it may not necessarily be assessed formally. This section will assume that you need to write an abstract for your dissertation and that it is assessable, but find out from your university's regulations whether one is needed and the weighting, if any, of marks accorded to the abstract.

An abstract is the first piece of writing that your readers will encounter when they open your dissertation but it should be the final paragraph that you write, and that is because (1) it is a summary of your work and (2) much of what goes in your abstract can be lifted straight from your completed dissertation.

The abstract normally appears after your Title Page and Acknowledgements. It should capture the essence of your research in a lucid and succinct way. Some institutions differentiate between a *descriptive* abstract and an *informative* abstract: the former concentrates on the structure of the dissertation and not its content (and so is of limited value), whereas the latter provides a condensed summary of the actual work carried out by the researcher. It is the informative abstract that is the norm in postgraduate dissertations and, consequently, the one covered in this chapter.

Unfortunately, the abstract is often treated as a tiresome afterthought by students. Ignorance of what an abstract is, and how to write one, further undermines student attempts to put together a competent abstract. Yet it is so easy to score marks in this area.

Like everything else in your dissertation, there is a technique to writing an abstract. A good abstract will normally contain the following five elements:

1 A statement of the problem/issue that you are investigating, including an indication of the need for your research.
2 Your research methods.
3 Your results/findings.
4 Your main conclusion(s).
5 Main recommendation(s) or implication(s) or lesson(s) learned.

On point 5 above, it is not always the case that based on your conclusion you have recommendations to make: it may be that you wish to emphasise the *implications* of your work, or lessons learned, rather than make *recommendations*. That is fine. The examples given in this chapter that refer to recommendations could equally have focused on implications or lessons learned, or any combination.

Very often, though, any implications, or lessons learned, are naturally embedded in the conclusion, explicitly or implicitly. Nonetheless, if you wish to highlight the implications of your work, or lessons learned, and make no recommendations, then you can do so without loss, provided that you do not have a research objective that refers to making recommendations!

Importantly, try and keep your abstract to one paragraph and to one page. Some institutions will also require your abstract to be *italicised*. Each of the above aspects that collectively form an abstract will now be discussed. You should take into account the preferences of your examining institution as well as the preferences of your supervisor, who may well be marking your dissertation.

How to write an abstract

If your abstract is to be assessed formally, it might only be worth about 10 marks at most, but it is very easy to obtain a high score; it is also just as easy to lose silly marks. Students who gain few marks for their abstract do so because they have no idea what an abstract is or how to write one. You can learn by examining the following example abstracts against the criteria set down below of what an abstract ought to contain:

1 A statement of the problem/issue that you are investigating, including an indication of the need for your research.
2 Your research methods.
3 Your results/findings.

4 Your main conclusion(s).
5 Main recommendation(s) or implication(s) or lesson(s) learned.

Example 1 An abstract on cybercrime

> *The purpose of this dissertation is to explore the adverse effect of Internet crime on the modern business community. Cybercrime is a recent computer security issue that has evolved quickly without adequate opportunity for the issues surrounding it to become widely acknowledged and subsequently acted upon. Although there has been an abundance of tools to try and protect organisations from cyber breaches, existing research shows that e-security breaches are commonplace. Furthermore, cyber-related legislation has been slow to keep pace with computer security breaches.*

Out of 10, this abstract would get a mark of 1 or 2, for a number of reasons:

- The abstract identifies the research area only in vague terms: something to do with 'cybercrime'. There is no indication of *what* area in cybercrime the dissertation tackles, although it does suggest the motivation behind the study: the continued proliferation of cyber attacks on organisations. So, in terms of the first task that a student ought to do in an abstract – identify the research area and motivation behind the research – this abstract has failed to be specific about the research area.
- Nor is there any reference to the research methods used, e.g. research strategy and data collection techniques.
- There appears to be a two-fold conclusion: 'e-security breaches are commonplace' and legislation is 'slow to keep pace with computer security breaches'. It is not clear what breaches are commonplace or which legislation is deficient or how these results were obtained.
- There are no recommendations or implications or lessons learned, e.g. for business community or law enforcement.
- In effect, the abstract is quite empty and devoid of meaningful information.

An improved abstract, although slightly on the long side, is as follows (for the purpose of emphasis, the key abstract elements are in bold, and in square brackets – they would not appear so in the finished version):

> **[Motivation]** *Cybercrime – crime on the Internet – is of growing concern in the business community. Despite UK Government initiatives (such as BS7799) and growing sales in software solutions (e.g. antivirus software), cyber attacks are on the increase.* **[Research Focus]** *This dissertation focuses on ways to assess the effectiveness of current preventative measures to cybercrime and to understand why organisations continue to be vulnerable to cybercrime.* **[Research Methods]** *This dissertation met these twin research aims through an extensive study of relevant literature and the implementation of practical*

research. The latter was carried out through a Case Study with Company XXX using semi-structured interviews with key I.T. security personnel. **[Findings]** *This research produced a number of key findings: recent surveys confirm a significant increase in the incidences of cybercrime and their impact on the business community but also the types of cybercrime (viruses, hacking, spam, identity theft, fraud, privacy issues, web vandalism, etc.); organisations lacked the security expertise to deal with cybercrime and so depended too much on readily available technical ways to combat cybercrime; organisations were not aware of Government recommendations on how to address internet-based security issues; and Governments and law enforcement agencies tended to localise cybercrime, allocating scant resources towards a global solution.* **[Conclusions]** *The main conclusions drawn from this research were that current approaches to fighting cybercrime are deficient because they fail to embrace an holistic approach, instead opting for a narrow local software-based focus, and that a lack of communication between major stakeholders at local, national and international level has hindered security development.* **[Recommendation]** *This research argues for a multi-pronged model to reduce incidences of cybercrime. One that takes into account risk-assessment models, local management of company policies, implementation issues (including proper resourcing and review policies), the need for global support infrastructures, and a means of fostering communication networks.*

Notice that each of the features expected of a good abstract – research focus, motivation behind the research, research methods, findings, conclusions and, in this case, recommendations – are to be found in the rewritten version. Note also that you can start with the motivation before identifying your specific research focus.

A common mistake

When it comes to writing dissertations, it is obvious that many students think up their abstract from scratch, without taking into account what they have written in their completed dissertation. You can get the information about your research work – motivation, research focus, research methods, findings, conclusions and recommendations or implications or lessons learned – by referring to the relevant chapters in your dissertation and summarising the appropriate segments, then sticking them in your abstract. For instance, when summarising your *research focus* for the abstract, go to your dissertation Introduction, locate your specific research objectives, summarise them into one or two sentences and insert this summary into your abstract. Do the same for the other parts that go to make up your abstract. Students often lose marks in their abstract by either ignoring what they have written in their dissertation or, worse, contradicting their own work!

Example 2 An abstract on software piracy

The aim of this project is to examine the impact of software piracy facing the modern business. With the Internet becoming an ever-present phenomenon, in homes and the business community, the problem of software piracy – in all its various guises – appears inexorable. As a result, many organisations continue to toil in the on-going battle to prevent this phenomenon escalating. The question has to be posed: is software piracy a problem that is solvable or do organisations have to concede that it is here to stay? This project tackles these difficult questions. However, it is possible to deal with piracy in a strategic and cost-effective way.

Once again, as in Example 1, this is a poor abstract, deserving of only 2 or 3 marks out of a possible 10. Why?

- To begin with, although the research area is made clear ('The aim of this project . . .') and suggests the importance of the work ('With the Internet becoming an ever-present phenomenon . . .'), the abstract fails to identify the research methods.
- It is also unclear if the sentence beginning 'As a result . . .' is personal opinion or based on the research findings.
- Similarly, is the last sentence ('However, it is possible . . .') a conclusion based on the research or is it a personal comment plucked out of thin air?
- And what is specifically recommended as a result of this research? There is a hint about a way to deal with piracy that is 'strategic and cost-effective', but no information on this is given.
- Vagueness in the abstract has cost marks.

What follows is an improved version, incorporating the main abstract elements (research focus, motivation behind the research, how the research was implemented, findings and conclusion/way forward):

[Research Focus] *The aim of this dissertation is to investigate the extent and nature of software piracy, concentrating on three types of software piracy facing organisations today: applications software piracy, music piracy and movie piracy.* **[Motivation]** *The use of modern technology, in particular the Internet, to facilitate new avenues for software piracy makes the need for this research timely.* **[Research Methods]** *This research project was based on a Literature Review and questionnaires sent to one organisation in Scotland.* **[Findings]** *The findings underline that there is an increase in software piracy and that different types of piracy have different markets (e.g. applications software piracy directed at the business community whereas music piracy is aimed at the young) and, correspondingly, different, although overlapping, solutions.* **[Conclusion]** *The main conclusion to be drawn from this work is that software piracy is both a criminal problem and*

a cultural issue, **[Recommendation]** *at the heart of which lies a solution based on ethical awareness training.*

Keywords: *software piracy, music piracy, movie piracy, ethics, training*

Notice that the abstract includes a line for 'keywords'. Keywords are terms that identify the main topics in your research. This is good practice: it quickly helps the reader to get a handle on what your research is about and replicates a practice that is commonplace in academic publications and so ought to meet with approval from your supervisor. Try to use no more than five keywords, otherwise it just becomes confusing for the reader.

Example 3 An abstract on plagiarism

What follows is an example of a very good abstract (on plagiarism), even though the 'motivation' part drags on somewhat:

[Motivation] *In this digital age where plagiarism is a growing phenomenon in universities, it is imperative that senior management and academic staff understand collectively how to deal with the problem. The term plagiarism itself is often vague, leading to misunderstandings about what is acceptable and unacceptable practice. Similarly, at the chalk-face level, tutors may lack the skills necessary to detect plagiarism. At a wider, institutional level, procedures may lack coherence and consistency, leading to potential claims by students of unfair treatment.* **[Research Focus]** *This dissertation develops a workable definition of plagiarism, explores how students plagiarise, offers guidance on how to detect plagiarism, and presents a formal model on how to deal with cases of suspected plagiarism.* **[Research Methods]** *The research methods consisted of a wide review of relevant literature on plagiarism, coupled with the collection and analysis of empirical data. The latter is based on a survey of staff from 10 universities in the UK, using structured questionnaires via SurveyMonkey.* **[Findings/Conclusions]** *The findings from this research show that the term 'plagiarism' is often misunderstood; that the Internet is a core vehicle for plagiarism; and that central to combating plagiarism is the need for a coherent, consistent university-wide approach.* **[Recommendations]** *This dissertation recommends such an approach, one based on a Staff Awareness and Training module.*

Keywords: *plagiarism, e-plagiarism, cheating, plagiarism software, essay banks*

What is good about this abstract? It contains all the ingredients of a complete abstract:

- It provides a statement of the 'problem/issue' – in this case, plagiarism – including 'an indication of the need for' the research (growing problem, lack of staff understanding on how to deal with it).

- It identifies the chosen research methods (literature review + survey of staff from 10 universities).
- It outlines the findings (confusion over the term plagiarism, use of the Internet to facilitate plagiarism, etc.).
- It points to a way forward (adoption of a Staff Awareness and Training module).
- Finally, keywords are included to add an academic flourish.

Note that you can merge your findings and conclusions together if you find it convenient to do so, as in the above example.

Example 4 An abstract on practice-based research: embroidery and weaving

What follows is an example of an excellent abstract on practice-based research where a student artist creates a woven sleeping bag. Once again, the text in bold is for your convenience and does not appear in the final abstract.

> **[Motivation]** *The artist was influenced by the (dying) tradition of Bedouin weaving, particularly the use of colour, strong horizontals in pattern, and decorative tassels and braids in the production of common-place objects of use, such as tents, rugs, and storage bags. The intention was to replicate this utility-based art form in a modern setting.* **[Research Focus]** *The work focused on producing a modern sleeping bag in the Bedouin style that could be used in practice and viewed as a work of art in its own right.* **[Research Methods]** *A Contextual Review was implemented to place the proposed artefact in the context of literature in Bedouin weaving and related objects of interest found in art galleries and camping shops. A practice-based strategy was then adopted as it best fits with the artist's aim of creating an art work and reviewing it. Data about the art work came from personal observation, the use of reflection-in-action logs, and the results from a focus group made up of one's peers. A reflection-on-action protocol was used as a basis for critical reflection. Critical reflection was achieved through the technique of description-analysis-synthesis in order to gain an incremental 'thick account'.* **[Findings/Conclusions]** *The main findings show that art as utility and utility as art can be successfully integrated; and ancient techniques can be replicated to an extent, increasing awareness and skills; but that each of these facets, when combined, multiply in proportion to the different, but inter-related, tasks to be overcome.* **[Lessons learned]** *The principal lesson learned from this work is that an artist needs to balance design sensibilities and intentions with immediate reality, taking into consideration crucial time and resource constraints.*
>
> **Keywords:** *Bedouin weaving, sleeping bag, artist as researcher, critical reflection*

This is an excellent abstract because it covers all bases – motivation, research focus, research methods, findings/conclusion and, in this case, a recommendation to other artists – in one concise, clear, consistent, and fluid paragraph. Notice that the recommendation is more about a lesson learned, implying a generic recommendation to other artists: 'Bear in mind time and resource constraints!'. This is perfectly acceptable, particularly in practice-based research where an art work, in whatever form, has been created and reviewed by the artist.

The next section provides an *abstract template* to help you write an abstract.

Abstract template

As an aide-mémoire, an *abstract template* has been created which highlights the main elements that you ought to include in your own abstract, i.e. research problem, need for your research, how you did your research, your findings, and any recommendations or implications or lessons learned. You can refer to this template when you are doing your own abstract. In that way, you should avoid missing out key abstract elements and so, in turn, create a favourable impression with your dissertation supervisor/marker. You can alter it to fit in with your dissertation and your own style of writing, as long as you address the main elements in an abstract.

Abstract

The focus of this research *is in the area of* . . . **The rationale for this study is** . . . **The research methods used include** . . . **The findings from this research** *provide evidence that* . . . **The main conclusion(s) drawn** *from this study is/are* . . . **This dissertation recommends** . . . (*or* **The implication(s) of this work is/*are*** . . . *or* **The main lesson(s) learned is/are** . . .).

Keywords: a, b, c, d, e

For tidiness, try and keep your abstract to one paragraph and no more than one page (a third of an A4 page normally suffices). Your institution's dissertation guidelines might even indicate the maximum number of words for your abstract. If your abstract starts to stretch over several paragraphs, there is the real danger that you are drawn into writing a disjointed, incoherent mini-essay, rather than concentrating on what you are supposed to be doing: writing an abstract. Keeping your abstract to one paragraph, as indicated in the template, should assist you in the task of producing a tidy, coherent and focused abstract.

When you write your dissertation abstract, make sure that your abstract can answer the following questions:

- Have I identified the issue researched?
- Have I indicated the motivation/rationale for this study?

- Have I stated how I did my research?
- Have I summarised my findings/results?
- Have I stated my main conclusion(s)?
- Based on my conclusion, have I made any recommendations or highlighted any implications or identified any lessons learned?

If you follow the abstract template, i.e. have addressed the above questions, then you should have an abstract that avoids the common pitfalls and is a credit to your dissertation.

Checklist

Writing the abstract

1 Focus of research ✓
2 Rationale ✓
3 Research methods ✓
4 Findings ✓
5 Main conclusion(s) ✓
6 Main recommendation(s) or implication(s) or lesson(s) learned ✓
7 Keywords ✓

Summary of key points

- An informative abstract, sometimes referred to as a *synopsis*, is a summary of your work.
- In the abstract you should: identify the focus of your research; point out the rationale for your research; reveal your research methods; state your main findings/conclusions; and, where applicable, specify your way forward/recommendations, or the implications of your findings, or lessons learned.
- Write your abstract in a single *italicised* paragraph.
- At the end of the abstract, in a separate line, include up to five keywords that you feel best capture the nature of your dissertation.
- To help you write an abstract, use the abstract template as an aide-mémoire. Rewrite it any way you want but make sure that you address the main elements.

Chapter **11**



Adding a professional touch

• Creating a list of abbreviations • Creating a glossary of terms • Creating a simple index • Further information • Checklist • Summary of key points

The suggestions in this final chapter are there to make your dissertation easier to read for your marker and, in doing so, help you to secure additional marks. None are compulsory but each adds a final professional flourish to your dissertation.

Creating a list of abbreviations

An *abbreviation* is a shortened version of a word or phrase. For example, Mr is a commonly used abbreviation for Mister. A second example of a common abbreviation is NHS, which is short for the National Health Service.

An acronym is a special type of abbreviation: it is an abbreviation that forms a pronounceable word. Examples include WHO (World Health Organization) and RADA (Royal Academy of Dramatic Art).

Why is NHS an abbreviation but not an acronym? While it is true that NHS is formed from the first letter of each word in the term National Health Service, it is not an acronym because NHS is not a pronounceable word. In other words, when we pronounce NHS we do so with reference to the individual letters and not as a single word. NHS is an example of *initialisation*. For the same reason, the abbreviations FBI, CIA, and MI5 are all are initialisations and not acronyms.

Creating a list of abbreviations (and that includes the special abbreviations called acronyms) is easy to do. First of all, they appear under the heading List of Abbreviations, or, if you prefer, Abbreviations. The list must be alphabetical.

How do you know what to put in the list? That's also easy: whenever you refer to an abbreviation in your dissertation, then add that abbreviation to your list. Please note that when you first refer to an abbreviation in the body of your dissertation, you should put its full term in parentheses; thereafter, you can use the abbreviation on its own. For example:

> SSADM (Structured Systems Analysis and Design Methodology) is a highly structured approach to the development of information systems. SSADM has seven main stages . . .

Alternatively, there are those who think it is better in the first instance to spell out the term and place the abbreviation in parentheses, as in:

> Structured Systems Analysis and Design Methodology (SSADM) is a highly structured approach to the development of information systems. SSADM has seven main stages . . .

Either way works. When it comes to creating your alphabetical list of abbreviations, all that is required is that you give the abbreviation and, opposite it, its full term. For instance, imagine that your dissertation was on a number of different types of methodologies used to develop information systems. Your list of abbreviations may appear as follows:

> List of Abbreviations
>
> | | |
> |---|---|
> | DSDM: | Dynamic System Development Methodology |
> | EPM: | Extreme Programming Methodology |
> | JAD: | Joint Application Development |
> | NRES: | National Research Ethics Service |
> | RAD: | Rapid Application Development |
> | SDLC: | Systems Development Life Cycle |
> | SSADM: | Structured Systems Analysis and Development Methodology |
> | SSM: | Soft Systems Methodology |
> | WAC: | Western Alliance Company |

Note that the list above also contains some abbreviations that are not computer-related terms – that is because, although the above dissertation topic is computer-related, the list of abbreviations ought to contain *all* the abbreviations you have expanded in parentheses in your dissertation. For example, NRES above might be where you submitted a research proposal for ethical consideration and WAC might be where you did your research case study.

Also note that there will be occasions where terms are so commonly used that it is unnecessary to expand the abbreviation or even include it in your list of abbreviations. Examples include NHS and FBI. Of course, there is nothing stopping you from including NHS or FBI in your list. Indeed, consistency is a good reason to do so.

Can you spot the three acronyms in the above example? Those are the ones that you can actually pronounce as a word, rather than spelling out the initials. Answer: JAD, RAD and WAC.

Let's create another example of a list of abbreviations, this time on a dissertation about mental health.

Abbreviations

ADD:	Anxiety and Depression Detector
CI:	Confidence Interval
CMDQ:	Common Mental Disorder Questionnaire
FN:	False Negative
FP:	False Positive
GP:	General Practitioner
HADS (-A):	Hospital Anxiety and Depression Scale (-Anxiety subscale)
HRG:	Healthcare Resource Group
NHS:	National Health Service
OCD:	Obsessive Compulsive Disorder
WHO:	World Health Organization

Once again, the main abbreviation topics are on the focus of the dissertation, but there are others such as CI, FN and FP, all of which relate to statistics rather than mental health per se.

Lastly, where does this list go in your dissertation? It is normally placed after your table of contents, your list of figures (if you have any), and your list of tables (if you have any), but check with your dissertation handbook or your supervisor.

That was easy. Now let's look at creating a *glossary of terms*.

Creating a glossary of terms

A glossary appears after a list of abbreviations. A glossary is an alphabetical listing of specialised terms used in your dissertation that you feel would be helpful to the reader if you defined them. How does a glossary differ from a list of abbreviations? Abbreviations in a list simply provide the full names from which the abbreviations are derived, whereas a glossary *defines* specialised terms. Abbreviations should not appear in your glossary – if you decide to define some of the items that are in your list of abbreviations, use the expanded words/terms in your glossary and not the abbreviations. For example, the following mini glossary contains two terms, one of which, SSM, is taken from a previously created list of abbreviations:

Abbreviations

SSM: Soft Systems Methodology

Glossary of Terms

Soft Systems Methodology. This is a people-centred approach to the development of information systems, using various tools and techniques, in order to better understand a problem situation.
Weltanschauung. This term is used to refer to someone's 'world view', i.e. philosophical perspective.

Note that the terms to be defined form a sentence on their own and are highlighted in bold, e.g. **Soft Systems Methodology**; the definition then follows.

An alternative way to list the terms in your glossary is to use lower case (even at the start of the first sentence) and link the term to be defined with its definition by use of what is called the *em dash*. The em dash is a long hyphen (—). It is called the em dash because it is the width of the letter *M*. The above glossary would then start to take shape as follows (you can head it Glossary of Terms, or just Glossary, if you prefer):

Glossary

soft systems methodology—this is a people-centred approach to the development of information systems, using various tools and techniques, in order to better understand a problem situation.
Weltanschauung—this term is used to refer to someone's 'world view', i.e. philosophical perspective.

Table 11.1 summarises these alternative styles:

Table 11.1 Glossary of terms: two different styles

Glossary of terms	**Glossary of terms**
Term 1. Definition/clarification.	**term 1—**definition/clarification.
Term 2. Definition/clarification.	**term 1—**definition/clarification.
.	.
Term n. Definition/clarification.	**term n—**definition/clarification.

The em dash (—) has the advantage that it has a stylistic professional look and feel to it. Indeed, it is a style used by the British Society of Indexers. The em dash also has another advantage: it pushes you towards a single, one-sentence explanation for each term. If you have to use a second sentence in your explanation, then you start with a capital letter as normal – and that sort of negates the point of the em dash, i.e. to keep you to one sentence.

Where do you find the em dash on your device? Just go on a search engine and type *Em dash [name of device]* and you should get a prompt answer. For example, to get the em dash on an iPad, simply hold down the hyphen key (-) and a list of dashes will pop up – the longest one (—) is the em dash.

A glossary, in effect, is a simplified dictionary. Not all terms that appear in your dissertation will require a definition, even if they appear in your list of abbreviations. For example, the National Health Service (or NHS) is so well understood that it would be unusual for a reader to be confused if you did not provide a definition of NHS. On the other hand, if your thesis is on the NHS, and you decide that it is ill-defined, then you might provide an alternative definition! Here is a simple 8-step guide to creating a glossary of terms:

1 Create the heading Glossary of Terms (or Glossary) after your list of figures (if you have any) or list of tables (if you have any) or list of abbreviations (if you have any), whichever comes last.
2 Go through your dissertation, highlighting specialised words or terms that require clarification.
3 Place each highlighted word alphabetically in your glossary. Use any system you want to create your list, but be consistent.
4 For each item in the glossary, provide a one-sentence definition/clarification (two sentences at most!). If you require two sentences, then it's not the end of the world.
5 Avoid *discussing* each item in the list. Discussions take place in the body of your work, not in the preliminary sections or appendices. You are merely explaining, as simply as possible, the meaning of your selected items so that your reader will be able to understand what you are writing about.
6 It is likely that any specialised terms you use in the body of your work will also be defined in the body of your work. It is permissible to lift that definition straight from your dissertation and use it in your glossary.
7 Avoid referencing in your glossary and also using other people's definitions. A glossary is not the place for referencing in a dissertation. Always define the glossary items in your own words.
8 Do not get carried away with your glossary. Too many items will prove distracting to the reader. Remember, it is specialised or unusual terms that you are trying to define, i.e. not every term that you come across in your dissertation. You may only have four or five items in your glossary, which is fine; then again, you may have about 10, which is also fine. Between 10–20 is unusual, but there may well be a case for that many; any more than 20 and you are in danger of entering encyclopaedia territory!

You could stop there, after adding a list of abbreviations and a glossary of terms, but why not go that little bit further and add a simple index at the end of your dissertation?

Creating a simple index

If you really want to impress your marker, then create an index. What is an index? It is primarily an alphabetical listing of the main topics, and subtopics,

in your dissertation. This list goes at the very back of your dissertation, after your appendices (if you have any).

The purpose of an index is to make it easy for the reader to locate topics in your dissertation. Like a reference list, an index does not form part of your word count. Here's how to create an index in three easy steps: (1) create the index template; (2) enter all your topics; and (3) enter all sources cited.

Step 1 Create the index template

- An index should be in a page with two columns. So, at the end of your dissertation, create a two-column page.
- At the top of the first column, type the heading INDEX (or Index).
- In the first column, enter the letters of the alphabet, using font size 10pt (i.e. making it smaller than the normal 12pt font used in the body of your dissertation), separating each letter with one blank line.

After Step 1, you should have a two-column (empty) index page similar to that shown in Table 11.2.

As you fill up the index, the content of the first column will start to spill over into the second column.

Step 2 Enter all your topics

To enter all your topics, here's what you shouldn't do. Don't go through the alphabet, asking 'Have I any topics that begin with A?', then 'Have I any topics that begin with B?', and so on. Instead, go through your dissertation and every time you come across a topic, put it in your index in the correct alphabetical position.

Let's assume that you have five main chapters in your dissertation: Introduction, Literature Review, Research Methods, Findings, Conclusion. You could set

Table 11.2 Index template

Index	
A	
B	
C	
.	
Z	

aside a leisurely 15 minutes each night to index one chapter, starting with your Introduction on a Monday, Literature Review on a Tuesday, etc., comfortably finishing your index within a week.

Let's suppose that your dissertation is on how to write a university essay and that you have come up with a structured approach, using a variety of tools and techniques, that other students might find of value.

Indexing your introductory chapter. There are generic topics that tend to appear in most student introductions, such as *background information*, *research topic*, *overall research aim* and *specific research objectives*, *timescale*, and *value of research*. These can all be entered in your index, as well as the heading *Introduction*. Incidentally, topics that appear in your index are referred to as *headings*.

You need to make sure that these entry items make sense. For example, *overall research aim and specific research objectives* is too clumsy for an index heading. It makes sense to divide this entry into two parts: *overall research aim* (or simply, *research aim*) and *research objectives*. The entry *timescale* does not make sense on its own. Which timescale? Much better to rewrite this entry as *research timescale*. For this example, the final entries for the introductory chapter would be: background information, research topic, research aim, research objectives, research timescale, and value of research, giving us a partially completed index (note that you need to add the page numbers wherein the items appear in your dissertation), as shown in Table 11.3.

Some comments:

- That only took minutes to index the first chapter!
- Each entry starts with a capital letter, then lower case is used for other words in a term (e.g. Background information); alternatively, it is permissible to have all entries in lower case (e.g. background information).

Table 11.3 Partially completed index: Introduction

Index	
A	Research aim, 2
.	Research objectives, 1–3
.	Research timescale, 2
	Research topic, 2
Background information, 1	.
.	.
.	.
Introduction, 1–3	Value of research, 3
.	.
.	.
	Z

- A comma is placed immediately after each entry, followed by the page number(s) wherein the entry appears in your dissertation (e.g. Value of research, 3).
- Note that the overarching topic Introduction, wherein the other topics mentioned above are covered, also appears as an item entry.
- If a topic appears in a group of consecutive pages, then this is indicated thus (e.g. Introduction, 1–3).

The trick is to take each chapter in turn, identify the topics discussed, take a note of where they occur in your completed dissertation, and enter them under appropriate headings in your index.

Let's now assume that your Literature Review discussed common problems students have with essays and recommendations made by the academic community on how students could improve their essay skills. Let's also suppose that topics covered included how to write an introduction, the main body of an essay, the conclusion, referencing, as well grammar and linguistic tools and techniques. Let's assume further that you did a case study, interviewing staff and students about their experiences and that you came up with a generic template on how to succeed with an essay question. Your index might start to take the shape shown in Table 11.4.

The above approach is structured in that it allows you to index chapter by chapter, giving you a sense of incremental achievement. Well done, you have created a simple *subject index*. You could stop at a subject index, which is perfectly acceptable, but you could easily enrich your index further by adding authors that appear in your dissertation, thereby making it a *subject and author index*. Here's how to enter authors in your index.

Step 3 Enter the authors

The word *author* is used loosely to mean any source you cite: your source could be an artist, a photographer, a politician, or an actual author.

You could decide to stick with a subject index, reasoning that you have a reference list showing all the sources cited in your dissertation. However, including authors allows your reader to quickly locate where you cite the authors, thereby adding value to including authors in your index. Doing so also sends a subliminal message that the references do exist and are not merely padding. Of course, if you do a bibliography instead of a reference list, then some of the sources in your bibliography will understandably not appear in your index.

Inserting authors into your index is easy: treat them as subject headings and, like other subject headings, list them alphabetically. For example, suppose we had cited Sylvia Plath on page 2 of our example dissertation. Here's how we would tell the reader where to find Sylvia Plath in our dissertation:

Paragraphs: the building blocks, 7
Paraphrasing, 15
Plagiarism, 8, 19

Table 11.4 Partially completed index: Literature Review

Index	
Abstract, i	Linguistic tricks and techniques, 11–12
Action words, 13, 26	Limitations, 18, 28
	Literature review, 5–18
Background information, 1	
Bloom's theory, 5–6, 11, 26, 28	Paragraphs: the building blocks, 7
	Paraphrasing, 15
Case study, 15, 19–25	Plagiarism, 8, 19
Citing sources, 8, 18, 21, 26	Punctuation, 9, 23
Cognitive skills, 5, 19–21	
Common mistakes, 7–9, 19–22	Quoting sources, 8, 18, 21–22, 26
Conclusion, 26–28	
Creating a structure, 13	Recommendations, 28
Critical commentary, 7–8, 24, 27	Reference list, 18, 30
	Referencing, 8, 18, 21, 26
Data collection, 16	Research aim, 2
Deconstructing an essay question, 13, 22	Research limitations, 18
Description, 8, 9, 23–24	Research methods, 4, 15–18
	Research objectives, 1–3
Essay title, 13	Research strategy, 15
	Research timescale, 2
Feedback, 24, 28	Research topics, 2
Findings, 19–25	
Framework for data analysis, 17	Spelling, 9, 23
Generic essay template, 14, 27–28	Useful verbs, 26
Grammar, 7, 23	Using quotations, 15
Hierarchy of essay questions, 5, 20, 26	Value of research, 3, 28
Informal feedback, 28	Word limit, 8
In-text referencing, 8, 18, 21, 26	Writing the conclusion, 17, 25
Introduction, 1–3	Writing the introduction, 14, 23
	Writing the main body, 15–16, 24

Plath, S., 2
Punctuation, 9, 23

You may have an author who appears in several places in your dissertation, e.g. in your introduction and at various times in your Literature Review. Suppose Sylvia Plath was also discussed between pages 6 and 8, and cited again on page 20, then this is how you would make this known in your index:

Paragraphs: the building blocks, 7

Paraphrasing, 15
Plagiarism, 8, 19
Plath, S., 2, 6–8, 20
Punctuation, 9, 23

Lastly, to find all occurrences of an author in your dissertation, make use of the Find facility in your word processor.

Well done! You have learned how to complete a simple index.

Further information

If you were to look at an index at the back of a book, you would likely see other features, such as topics broken down into subtopics and the use of two terms, *see also* and *see*. The simple one-liner index explained above is sufficient for a dissertation. These other features will be explained here for completeness but no one is expecting you to include them in your index. On the other hand, if you have some time on your hands, then by all means include one or two examples of subtopics and one or two examples of the use of *see also* and *see*, but don't go overboard. After all, adding extra value to your dissertation is a balancing act, measuring effort against benefit.

Step 4 Decide which topics are also subtopics

One obvious clue that a topic has subtopics occurs when you find yourself starting item entries with the same word. For example, in the sample index we have been working on, a number of topics begin with the word Research (Research aim, Research objectives, Research methods, etc.). They could all be listed as subtopics of the item Research, as follows:

Recommendations, 28
Reference list, 18
Referencing, 8, 18, 21, 26
Research,
  aim, 2
  limitations, 18
  methods, 4, 15–18
  objectives, 1–3
  strategy, 15
  timescale, 2
  topics, 2

There is no one way to identify subtopics (also referred to as subheadings). That is a choice for you to make, in a way that you think will be helpful to your reader. In the aforementioned example, you could have had no subtopics under

the heading *Research*, made all the subtopics as single-level entries in their own right, but then created subtopics for the entry *Research methods*:

Recommendations, 28
Reference list, 18, 30
Referencing, 8, 18, 21, 26
Research aim, 2
Research objectives, 1–3
Research methods,
  case study, 15, 19–25
  data collection, 16
  framework for data analysis, 17
  limitations, 18
  strategy, 15
Research strategy, 15
Research timescale, 2
Research topics, 2

You can pick any main heading in your index and create subheadings that reflect related subtopics in your dissertation. For instance, under the heading *Language tricks and techniques* in the sample index, we could have created subheadings to reflect issues discussed in the dissertation, e.g.:

Linguistic tricks and techniques,
  alliteration, 11
  assonance, 11
  consonance, 11–12
  metaphors, 12
  similes, 12

Some comments on topics and subtopics:

- Each subtopic must be indented under the main topic of which it forms part.
- When you enter a subtopic, it must also appear as a topic in its own right. So, for example, the subtopics, *alliteration*, *assonance*, *consonance*, *metaphors*, and *similes* will also need to appear as entries in their own right.
- Keep it simple: avoid having subtopics within subtopics.

The new subtopics, *Research methods* and *Linguistic tricks and techniques*, including their individual entries, are shown in Table 11.5.

Of course, once you finish indexing all your main chapters, you will find that some topics have cropped up in different parts of your dissertation, and this will show in the page numbers beside the entries. For example, your research aim and your research objectives will have been identified in your introductory

Table 11.5 Updated sample index with subtopics

Index

Abstract, i
Action words, 13, 26
Alliteration, 11
Assonance, 11

Background information, 1
Bloom's theory, 5–6, 11, 26, 28

Case study, 15, 19–25
Citing sources, 8, 18, 21, 26
Cognitive skills, 5, 19-21
Common mistakes, 7–9, 19–22
Conclusion, 26–28
Consonance, 11–12
Creating a structure, 13
Critical commentary, 7–8, 24, 27

Data collection, 16
Deconstructing an essay question, 13, 22
Description, 8, 9, 23–24

Essay title, 13

Feedback, 24, 28
Findings, 19–25
Framework for data analysis, 17

Generic essay template, 14, 27–28
Grammar, 7, 23

Hierarchy of essay questions, 5, 20, 26

Informal feedback, 28
In-text referencing, 8, 18, 21, 26
Introduction, 1–3

Linguistic tricks and techniques,
- alliteration, 11
- assonance, 11
- consonance, 11–12
- metaphors, 12
- similes, 12

Limitations, 18, 28
Literature review, 5–18

Metaphors, 12

Paragraphs: the building blocks, 7
Paraphrasing, 15
Plagiarism, 8, 19
Punctuation, 9, 23

Quoting sources, 8, 18, 21–22, 26

Recommendations, 28
Reference list, 18, 30
Referencing, 8, 18, 21, 26
Research aim, 2
Research methods,
- case study, 15, 19–25
- data collection, 16
- framework for data analysis, 17
- limitations, 18
- strategy, 15

Research objectives, 1–3
Research strategy, 15
Research timescale, 2
Research topics, 2

Similes, 12
Spelling, 9, 23

Useful verbs, 26
Using quotations, 15

Value of research, 3, 28

Word limit, 8,
Writing the conclusion, 17, 25
Writing the introduction, 14, 23
Writing the main body, 15–16, 24

chapter, but will also pop up throughout your dissertation. Thus, other page numbers will be added to those entries to reflect that fact:

Research aim, 2, 6, 15, 23, 26
Research objectives, 1–3, 6, 12, 15–16, 21, 26–28

In other words, because you index a chapter one night, that does not mean that the topics in that chapter do not recur. Only when you index your final chapter (your Conclusion), will you complete your index.

Step 5 *See also* and *see*

See also is used to indicate that a topic is *related to* another topic. In practice, this normally occurs where a topic also appears as a subtopic elsewhere in your index. To take the index shown in Table 11.5, *Alliteration* appears as an entry in its own right, but it also appears as a subtopic within *Linguistic tricks and techniques*. To show this relationship, under the stand-alone entry *Alliteration*, you would write:

Abstract, i
Action words, 13, 26
Alliteration, 11
see also Linguistic tricks and techniques
Assonance, 11

Assonance also appears under *Linguistic tricks and techniques*, so you would do the same for *Assonance* to show the same relationship:

Abstract, i
Action words, 13, 26
Alliteration, 11
see also Linguistic tricks and techniques
Assonance, 11
see also Linguistic tricks and techniques

You would also do the same for each of *Consonance*, *Metaphors*, and *Similes*, because they are all related to the topic *Linguistic tricks and techniques*.

Similarly, the entries *Case study*, *Data collection*, *Framework for data analysis*, *Limitations*, and *Strategy* also appear as subtopics under the heading *Research methods* and so to show this relationship, you would also use *see also* under the stand-alone entries:

Case study, 15, 19–25
see also Research methods

Data collection, 16
see also Research methods

Framework for data analysis, 17
see also Research methods

Limitations, 18, 28
see also Research methods

Research strategy, 15
see also Research methods

Note that *see also* is indented and *italicised*.

See is used when you have two items in your index that are synonyms, i.e. they mean the same thing. *See* will not occur that often. An example of a synonym in the sample index occurs with the headings *Citing sources* and *In-text referencing*. In the context of our dissertation they essentially mean the same thing. In which case, we use *see* to indicate that they are synonyms:

Citing sources, 8, 18, 21, 26
see In-text referencing

And:

In-text referencing, 8, 18, 21, 26
see Citing sources

This chapter has shown you how to add a professional flourish to your dissertation by including a list of abbreviations, a glossary of terms, and a simple one-level index.

Checklist

Adding a professional touch

1 Created a list of abbreviations ✓
2 Created a glossary of terms ✓
3 Created a simple index ✓

Summary of key points

- An *abbreviation* is a shortened version of a word or phrase. An alphabetical list of abbreviations normally appears after your contents page. Opposite each abbreviation, provide the full version of the abbreviation.
- It would also be helpful to forewarn your reader of any specialised terms used in your dissertation. A *glossary of terms is* an alphabetical list of specialised terms used in your dissertation. Opposite each specialised term, provide a definition in your own words. The glossary normally appears after your list of abbreviations.
- An *index* is an alphabetical list of *topics* in your dissertation, showing where these topics are covered in your dissertation. It is placed at the end of your dissertation, after your appendices.
- An index can also list *authors* cited in your dissertation, if you think doing so would be useful to the reader.
- The *topics* in your index are also known as *headings*. Accordingly, *subtopics* are often referred to as *subheadings*.
- Use *see also* to refer the reader to related entries in your index.
- Use *see* to refer the reader to synonyms in your index.

Chapter **12**



Summary of good and bad practice

• Forewarned is forearmed • Summary of good practice to adopt • Summary of bad practice to avoid

Summary notes on good dissertation practice to adopt and bad dissertation practice to avoid, from writing an abstract to concluding a dissertation, are presented as an aide-mémoire.

Forewarned is forearmed

Forewarned is forearmed. This book has taken you through the things that you need to do to complete a dissertation. In doing so, it has also highlighted the common mistakes that supervisors observe their dissertation students making, again and again, year in, year out. As a memory aid, this information is summarised for easy reference.

The final chapter concentrates on the good and bad things that occur in the core elements that typically go to make up the written dissertation (Research Proposal, Abstract, Introduction, Literature Review/Contextual Review, Research Methods, Findings and Discussion, and Conclusion). In addition, reference is made to the dissertation marking scheme and the viva.

There are other matters that you need to consider when completing your dissertation, from picking a topic that is of genuine interest to you, to creating a dissertation template at the start (to give you an idea of what lies ahead), to making the most of meetings with your supervisor, to keeping an eye on your word count.

Above all, doing a dissertation ought to be an enjoyable experience, an opportunity to show what you can do, but it requires serious effort on your part. It is an intellectual journey that demands your active participation: passengers rarely pass. Being forewarned about the common pitfalls to avoid, together with the good practice to adopt to get through the dissertation process, will allow you to start your dissertation odyssey with confidence.

Summary of good practice to adopt

Research proposal

- Provide background information on research topic.
- Justify the need for your study.
- Identify overall research aim and specific research objectives.
- Outline your research methods.
- Estimate duration of dissertation phases.
- Complete a Research Ethics Approval Form or NHS equivalent.
- Adhere to the core ethical principles of *transparency*, *confidentiality*, *voluntary* participation, *no harm* to your participants (or you) and *impartiality*.

The marking scheme

- Get hold of the marking scheme for your dissertation.
- Understand it.
- Use it as a checklist as you do your dissertation.
- Before submission, have a go at marking it yourself!

Abstract

- Write it last!
- Identify the problem/issue that you investigated.
- Outline how you did your research (i.e. your research methods).
- State your main findings/conclusion(s).
- Indicate your recommendations or lessons learned, etc.
- Include keywords.
- Keep to one paragraph (it is not an essay!)
- Apply the abstract template!

The Introduction

- Provide a clear structure (similar to research proposal):
  - Background information

  - Research focus
  - Overall aim and research objectives
  - Outline research methods and timescales
  - Value of your research
  - Outline structure of dissertation
- Show initiative (in sourcing information).
- Produce clear, achievable research objectives.
- Emphasise the value of/need for your research.

The Literature Review/Contextual Review

- Well-structured, with headings clearly linked to research objectives.
- Brief introduction reminding reader of basic content to be covered.
- Terms defined where necessary.
- Meaningful subsections.
- Brief descriptions to lay foundation for discussions.
- Ample evidence of critical evaluation.
- Attention paid to academic language.
- Consistent referencing style, using sources that are *relevant*, *reliable*, and *recent*.
- Smooth linkage between subsections.
- Coherent and consistent narrative.
- Brief summary highlighting emerging issues.
- Link to next section.

Systematic Review

- Frame your research question using PICO.
- Find literature to meet your research question.
- Exploit online resources (e.g. MEDLINE).
- Justify literature inclusions and exclusions.
- Pool data.
- Place findings in context.

Research Methods (traditional)

- Identify, describe and justify your research strategy (case study, survey, experiment, etc.).
- Identify, describe and justify your data collection techniques (interviews, questionnaires, etc.).
- Explain where you will get your data from, and state your sample size.
- Summarise the above, using diagrams where possible.

- Explain how you will analyse your collected data (framework for data analysis).
- Outline limitations/potential problems (but explain why your work is valid and reliable).

Research Methods (artist as researcher)

- As above but with a focus on practice-based research as the research strategy and associated data collection and analysis techniques (e.g. reflection-**in**-action logs and reflection-**on**-action logs), including any traditional strategies or data collection techniques you see fit to use.

Findings and Discussion

- Have a title that reflects the type of empirical research you did.
- Have a structured approach involving *description*, *analysis* and *synthesis*.
- Introduce your chapter, refer to: the specific research objective(s) covered by the empirical study, the type of data collected, how you intend making sense of the data, and any relevant information that can place your empirical research in context.
- Report on the results (*description*).
- Comment on the results (*analysis*).
- Compare empirical results against findings in Literature Review (*synthesis*).
- Summarise key points.

Concluding your dissertation

- Write a brief introduction. Remind reader of initial research objectives. Identify purpose and content of concluding chapter.
- Summarise findings for research objectives and provide conclusions (related to each research objective).
- Based on conclusions, offer recommendations or discuss implications of your work or highlight lessons learned.
- Identify contribution to knowledge.
- Include self-reflection on dissertation journey, highlighting points of learning and advice to others about to start on their dissertation journey.

The viva

- Prior to your viva, summarise, for revision purposes, your dissertation chapters.
- Anticipate questions (and prepare answers):
  - on preliminary issues (e.g. research focus, need for your research, etc.)

  - aspects of your Literature Review/Contextual Review (scope, depth, focus, range of sources, relevance, your interpretation of what other people are saying, etc.)
  - your research methods and data collection techniques (relevant, justified, clearly explained?)
  - how you analysed your empirical work
  - your conclusions (justified?) and associated recommendations or lessons learned, etc.
- Have a mock viva.
- Write examiner questions down.
- Take your time answering questions.
- Defend your work!

Summary of bad practice to avoid

Research proposal

- Vague research objectives – over-ambitious.
- Unrealistic timescales.
- Not justifying need for research.
- Failing to complete a Research Ethics Approval Form.
- Ignoring the core ethical principles of *transparency*, *confidentiality*, *voluntary* participation, *no harm* to your participants (or you), and *impartiality*.

The marking scheme

- Not paying attention to the marking scheme when doing your dissertation.

Abstract

- Writing it without knowing what is supposed to go in it.
- Failing to mention key information:
  - Problem/issue that you investigated
  - Your research methods
  - Your main findings/conclusion(s)
  - Key recommendation(s) or main lesson(s) learned
- Writing it without looking at your dissertation for information.
- Engaging in a mini Literature Review.
- Writing an essay (it is an abstract, not an essay).

The Introduction

- Paying scant attention to background reading.
- Devoting too much attention to background reading!

- Failing to address other key elements: research focus, specific research aim and objectives, outline of research methods, timescales, and value of research.
- Lack of continuity between subsections.

The Literature Review/Contextual Review

- Ill-structured.
- No obvious relevance to research objectives.
- Superficial, skeletal subsections.
- Too descriptive in nature.
- Little or no evidence of critical evaluation.
- Non-academic language.
- Inconsistent referencing styles.
- Concentrating almost exclusively on web sources.
- Lack of fluency between subsections.
- Incoherent and inconsistent narrative.
- Ends abruptly with no obvious link to next section.

Systematic Review

- Vague research question.
- Literature search process not methodical.
- Selection process not justified, including reasons for exclusions.
- Publication bias.
- Hierarchy of preferred evidence at lower end of scale (uncontrolled trials, expert opinion, etc.).
- Inappropriate pooling of data.
- Failure to place results in context.

Research Methods (traditional)

- Spending the bulk of your time describing a whole realm of research strategies (case studies, ethnography, experimental research, surveys, etc.).
- Not justifying your chosen research strategy.
- Misunderstanding the nature of qualitative/quantitative research.
- Introducing unexplained philosophical terms!
- Producing a long descriptive monologue on the different ways that data can be collected (questionnaires, interviews, etc.) but
  - Lacking detail on how and where *you* will collect data or what *you* intend doing with the data once you get it

  - Pretending that there are no limitations to be addressed or potential problems to be minimised in relation to your research methods and particular project

Research Methods (artist as researcher)

- Waffling about matters that are unrelated to your research methods.
- Not explaining the nature of your research strategy in terms of what it is, why you are using it, what you intend creating, how you will create it, and why you are creating it.
- Lack of detail on how and where *you* will collect data or what *you* intend doing with the data once you get it.
- Pretending that there are no limitations to be addressed or potential problems to be minimised in relation to your research methods and particular project.

Findings and Discussion

- Have a bland, non-descriptive title.
- Do not have a structure (other than a bland heading).
- Do not remind the reader of the research objective(s) covered by your empirical study.
- Do not remind the reader of the empirical data you set out to collect.
- Do not inform the reader about how you intend making sense of the data.
- Do not give the reader any information that might helpfully place your study in context.
- Do not build up an accumulative, rich narrative of clear facts and figures and evidence-based commentary.
- Instead: either just give basic facts and figures or give your comments without reference to the former.
- Do not synthesise your results with what you found out in your Literature Review.
- Do not provide a summary of key points.

Concluding your dissertation

- Do not revise your research objectives to check on whether or not you have achieved them.
- Do not summarise your work.
- Make no attempt to link your conclusions, if you have any, to your Literature Review/Contextual Review or Empirical Research findings.
- Offer no recommendations on the way forward. Nor discuss the implications of your research. Nor highlight any lessons learned.

- Treat your Conclusion as if it were another Literature Review!
- End abruptly!

The viva

- Do not anticipate obvious questions.
- Rush your answers.
- Argue with the examiners (there is a difference between having a professional disagreement and rudeness) or, just as bad, agree with every comment they make!
- Give monosyllabic answers.
- Do not refer to your dissertation when answering questions (you are being tested on the work that you have submitted, so it is to your work that you refer when giving answers).

Appendix A: Dissertation proposal form

Master's dissertation proposal form **University of Xxxx**

Student name:

Matriculation number:

Programme:

Department:

Working title:

Research aim/question:

Specific research objectives:

Place your research in context:

Why is your research worth doing?

How are you going to meet your overall research aim?

Provide a timetable of activities:

What key literature influenced your choice of research topic?

Are there any ethical issues to consider?
If yes, please complete Ethical Proposal Form.

Supervisor (if known):

Appendix B: Sample dissertation proposal

University of Inverclyde Dissertation Proposal

Name of student:	Joseph Bloggs
Programme/Year:	MA Educational Studies 2014/2015
Dissertation title:	Preparing University Academic Staff for e-Learning: A Study of Drivers, Barriers and Preparation Models/ Frameworks

1.1 Background

The traditional approach to teaching and learning in universities involves a mix of face-to-face lectures, seminars/tutorials, individual tuition/supervision and, where relevant, laboratory work, all reinforced with independent self-study. The use of Information and Communication Technology (ICT) over the last two decades has increased the means of enhancing student knowledge. This is reflected in the prevalence of PowerPoint-based lectures, digital library databases, mobile technologies (e.g. iPad/iPhone), the Internet and managed Virtual Learning Environments (VLEs). When ICT is used to support independent study, it is generally given the term 'e-Learning'. E-Learning is now a core strategy for universities, reflected in their investments in VLEs such as WebCT, Blackboard and Moodle (OLTF, 2011).

However, an area of consistent concern is the preparedness of academic staff to contribute meaningfully to e-Learning environments (Salmon, 2011; Thuraya, 2014). Indeed, as early as 1997, Dearing highlighted in his report (1997, p. 36) that 'many academics have had no training and little experience in the use of communications and information technology as an educational tool'. As the technology has increased down the years, so have the voices expressing concern over staff training to cope with a new pedagogy that changes staff from the *sage on the stage* to a *guide on the side* (Laurillard, 2001; 2009; Straub, 2002; MacKeogh and Fox, 2009; Slade and Readman, 2013). Mayes and De Freitas (2013, p. 28) recognise that 'positioning empowered individual learners at the centre of the technology-enhanced design process will clearly impact on the role of the educator' and that there is a need for universities to articulate a teaching and learning pedagogy that allows academic staff to bridge the gap between theory and practice. A critique of staff preparation models/frameworks will form the central plank of this research.

Academic staff engagement is crucial to the success of e-Learning in universities (Dyment and Downing, 2013). If academic staff do not accept the educational benefits of e-Learning, then they may be less likely to be willing participants in e-Learning initiatives, irrespective of the professional nature of staff training programmes. Schneckenberg (2009) argued that there is a need to understand the staff barriers to meaningful involvement in e-Learning, citing staff motivation as an example. Tomei (2004) highlighted the negative impact of online teaching on academic staff 'load'. As such, it makes sense as part of the study of academic staff preparedness for e-Learning, to clarify the university drivers for e-Learning (and how they are communicated to academic staff) and the main barriers to academic staff becoming involved in e-Learning.

These concerns over staff training issues necessitate an exploratory study on how academic staff are being prepared for e-Learning. Furthermore, technology is changing rapidly with students no longer solely dependent on face-to-face instruction – and so universities need to adapt to this changing educational landscape. A failure by universities to ensure that their academic staff can meet the challenges of an ever-developing digital world will impact adversely on the student learning experience and, in effect, the ability of a university to meet its core e-Learning strategy. Having an academic body well versed in e-Learning pedagogy will benefit senior management, academics and students themselves.

1.2 Research aim and objectives

The overall aim of this research is to advance an understanding of the issues surrounding the preparation of university academic staff to support student e-Learning. Within the context of higher education, the specific objectives of this research are to do the following:

1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
4 *Formulate* recommendations on staff preparation issues.

1.3 Research methods and timescales

This research will depend on a review of pertinent literature (objectives 1 and 2) and the collection of empirical data through a case study (objective 3). The secondary data (i.e. the literature review) will largely come from journals (e.g. *International Journal of e-Learning*); conference proceedings (e.g. Online Educa); seminal books (e.g. Laurillard, 2009); and

Table 1 Breakdown of dissertation timescales

Dissertation activity	Duration (in weeks)	Month
Clarify aim/objectives	2	June
Literature Review	4	June–July
Research methods	2	July
Data collection	3	August
Findings	3	August–September
Conclusion	2	25 September

published surveys/reports (e.g. Walker *et al.*, 2012). The following library databases will, in particular, be used to support this research: ERIC, British Education Index (ProQuest) and JSTOR.

The primary data (i.e. empirical data) will be collected through a case study. A case study is a study of a single unit (Cohen and Manion, 2005), allowing exploratory research in depth (Yin, 2003). The case unit will consist of an academic department within Inverclyde University. The means of collecting the primary data will be based on an initial questionnaire from which a subset of the target population will be subject to a detailed follow-up interview. In addition, a number of *elite staff* – those responsible for the success of e-Learning and staff training – will be interviewed. The combination of a literature review and empirical research will allow theory and practice to be compared, from which a rich picture of academic staff preparation should emerge.

This research does not aim to generalise the status of staff preparation in e-Learning but, instead, seeks an in-depth understanding of the elements that constitute e-Learning preparation, including drivers and barriers. Hence the use of a case study to support an extensive review of related literature.

Table 1 shows the expected timescales for this dissertation proposal, from finalising initial research objectives to submission of dissertation.

Full details of the research methods used for this research, including justification for the chosen methods, will appear in a chapter entitled 'Research Methods' within the dissertation proper.

1.4 Beneficiaries of this research

This research will benefit the academic research community by contributing to the field of e-Learning in the area of academic staff preparation. The results of this work – secondary and primary data – can be used to enrich existing research schemas, particularly in relation to staff preparation models/frameworks and staff views, thus adding incrementally to the knowledge base of e-Learning research.

Although the output from this research work cannot be generalised, nonetheless the literature review findings and the empirical case study can act as a

focus to inform elite staff in universities on potential staff e-Learning preparation issues, encouraging management to revisit how they prepare academic staff to engage fully with e-Learning. At the very least, this work will raise the profile of an area of educational delivery – e-Learning – that Vermeer (2000, p. 329) once decried had often been dependent on 'the enthusiasm of the recently converted' for its success. Technology is increasingly at the heart of university education and this research will benefit all those with an interest in ensuring that technology is exploited by fully trained academic staff: senior management, students and academic staff.

1.5 Ethics

Academic staff will be interviewed as part of this research. This research will adhere to the five core principles of *transparency*, *confidentiality*, *voluntary*, *do no harm*, and *impartiality*. The purpose of this research will be explained to all participants – the details of which will be clearly set out in this dissertation – allowing them to give informed consent. To this end, a Participant Information Sheet will be issued to each participant. The interviews will be anonymous (Interviewee 1, Interviewee 2, etc.) with identifying material removed (unless agreed explicitly by the participant) in line with Data Protection principles. All participants will have the opportunity to opt out at any stage. The research does not deal with vulnerable citizens, is not controversial, and will do no harm to participants. Any perceived working relationships with participants will be fully declared so as to minimise any perception of bias. The removal of identifying material from interviews will aid in this regard when it comes to data analysis.

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Student signature:	Joseph Bloggs
Date:	15 April 2014

Appendix C: Research objective keywords

Analyse	Determine	Generate	Outline	Solve
Apply	Develop	Highlight	Prescribe	Sort
Appraise	Devise	Identify	Prioritise	Specify
Assess	Diagnose	Illuminate	Probe	Standardise
Calculate	Differentiate	Illustrate	Process	State
Categorise	Discern	Implement	Produce	Streamline
Clarify	Discover	Improve	Progress	Study
Classify	Distinguish	Indicate	Prove	Synthesise
Collate	Establish	Integrate	Quantify	Tabulate
Compare	Estimate	Invent	Query	Test
Construct	Evaluate	Investigate	Recommend	Trace
Contrast	Examine	Itemise	Reconstruct	Transform
Create	Execute	Judge	Refine	Translate
Critique	Expand	Justify	Reform	Underline
Demonstrate	Experiment	List	Reveal	Understand
Derive	Explain	Locate	Review	Unite
Describe	Explore	Measure	Scrutinise	Use
Design	Fix	Modify	Show	Validate
Detect	Formulate	Organise	Simplify	Verify

Appendix D: Sample supervision contract

DISSERTATION SUPERVISION CONTRACT

Student Name:

Programme:

Supervisor Name:

Other Supervisor(s):

Working Title:

Focus of Study:

Timescale:

Skills Training Required:

Responsibilities of supervisor:

- To offer advice on proposed research;
- To give guidance on expected standard of work;
- To meet with the student regularly to discuss work and provide constructive criticism;
- To give timely feedback;
- To warn student if in danger of failing;
- To treat the student fairly and with respect.

Responsibilities of student:

- To be familiar with the dissertation guidelines;
- To agree on a suitable research topic with your supervisor, including timetable of activities;
- To arrange a schedule of meetings with your supervisor;
- To participate in supervision meetings;
- To submit work regularly for review;
- To submit a final dissertation that is all your own work.

Signature of student:

Date:

Signature of supervisor:

Date:

Signature of Director of Studies:

Date:

Appendix E: Useful Latin terms

e.g. is Latin for *exempli gratia*, and means 'for the sake of an example'. Use when you want to give an example, or examples, of something:

> *Many literary geniuses hold politically liberal views (e.g. D. H. Lawrence).*
>
> *Exercise has undoubted advantages (e.g. keeping fit, weight loss).*

i.e. is Latin for *id est* and means 'that is'. Think of i.e. to mean 'in other words'. Use i.e. when you want to clarify something:

> *Casey was wholly prejudiced against women, i.e. he considered them to be physically, intellectually and morally inferior to men.*

---

et al. means 'and others'. Use for multiple authors:

> *(Hogarth et al., 2019) or Hogarth et al. (2019)*

---

ibid. means 'in the same place'. Refers to the last source cited:

> *Cunningham (2020) claims that mobile technologies are detrimental to the educational development of university students. Perceptions of the advantages of interconnectivity are often exaggerated. Even the simple skill of handwriting has been replaced by ungrammatical abbreviations (ibid.).*

Also used in footnotes and numbered Reference lists to save you repeating the same source details for the last source cited. Here is an example of ibid. appearing in footnotes using the Chicago referencing system (note: the house style for footnotes can change from university to university):

1 Thomas Hohner. *Poverty in Glasgow* (Edinburgh: White Publishing, 2020), 18.
2 Ibid., 21–23.

op. cit. means 'from the work cited'. You use *op. cit.* when you are referring to a source you have already cited (somewhere) in your dissertation. *Op. cit.* is different from *ibid.* in that *ibid.* refers only to the last source cited (as in the above example) whereas *op. cit.* refers to a source cited *somewhere* previously in your dissertation.

> *When it comes to deciding upon appropriate levels of punishment for students guilty of plagiarism, differences of opinion surface.*

▶

Murphy (2019) argues for leniency, claiming that students are victims themselves. Houston (op. cit.) refutes this line of argument.

inter alia means 'among other things'. Examples:

The supervisor advised his dissertation students, inter alia, to improve their grammar.

Rogers (2018) believed that personal fulfilment depended on, inter alia, financial security.

The judge said, inter alia, that the time to bring the case to court had elapsed.

sic is short for **sic erat scriptum** and means 'thus/such was it written' and is used to indicate that there is a spelling mistake (or glaring grammatical error) in a quote that you are using but that the mistake is not yours. It is not your place to correct the error.

Grearson (1982, p.10) captured the essence of Thatcher's Britain when he observed that the 'age of consumerism is well and trully [sic] integrated into today's society'.

v.i. is Latin for **vide infra** and means 'see below'. Example:

Criticisms of capitalism are numerous (v.i., Table 6).

viz. is an abbreviation of the Latin word **videlicet** (itself a combination of two Latin words, **videre** 'to see' + **licet** 'it is permissible') and is equivalent to writing 'in other words', 'that is to say', and 'namely'. It is used to introduce examples and lists ('namely') or to interpret meaning ('in other words', 'that is to say'). Examples:

Robert had a number of complaints that he wished to raise with his boss, viz.: his lack of promotion; his unreasonable working hours; and his workload.

Stevenson (2007) underlined the importance of education, viz. that a learned society is better placed to cope with life's challenges.

Fotheringham's main point, viz. that good teachers were born and not made, was much disputed.

v.s. is Latin for **vide supra** and means 'see above'. Example:

The history of Ireland has been one of turmoil (v.s. Figure 3) but the future is one of optimism.

Appendix F: Harvard referencing templates (with examples)

The following reference templates use the Harvard standard set by Pears and Shields (2019) in their popular book *Cite Them Right*.

Art work

1. Art work in gallery

Artist (year) *Title* [Medium]. Gallery name, City.

Rembrandt, van R. (1642) *Night watch* [Oil on canvas]. Rijkmuseum, Amsterdam.

If viewed online:

Artist (year) *Title* [Medium] Available at: URL (Accessed: date).

Rembrandt, van R. (1642) *Night watch* [Oil on canvas]. Available at: https://www.rijksmuseum.nl/en/search/objects?q=Rembrandt+&p=1&ps=12&st=-OBJECTS&ii=2#/SK-C-5,2 (Accessed: 10 June 2019).

Note: if the exact date a work was created is not known, then use n.d. ('no date') for year, or, if approximation given by source, then use c. ('circa') with approximated year, as shown in the following examples:

Botticelli, A. (n.d.) *The Birth of Venus* [Tempera on canvas]. Uffizi Gallery, Florence.
Rembrandt, van R. (c. 1628) *Self-portrait* [Oil on panel]. Rijkmuseum, Amsterdam.

2. Temporary exhibition

Title of exhibition (year) [Exhibition]. Place exhibited. Date(s) of exhibition.

NoNoseKnows (2015) [Exhibition]. Glasgow International 2016, Tramway Gallery. 8–25 April 2016.

If viewed online:

Title of exhibition (year) [Exhibition]. Available at: URL (Accessed: date).

A world view: John Latham (2017) [Exhibition]. Available at: http://www.serpentinegalleries.org/exhibitions-events/world-view-john-latham (Accessed: 19 March 2019).

3. Artwork in public space

Artist (year) *Title* [Type]. Location, City (Viewed: date).

Niki de Saint Phalle (1996) *Tympanum* [Mirror mosaic]. Glasgow Gallery of Modern Art, Scotland (Viewed: 21 March 2020).

4. Exhibition catalogue

Author (year) *Title of exhibition*. Place of exhibition, date(s) of exhibition [Exhibition catalogue].

Humphrey, P. (2012) *The Essence of Beauty: 500 Years of Italian Art*. Kelvingrove Art Gallery and Museum, Glasgow, 6 April–12 August 2012 [Exhibition catalogue].

Book

1. Printed book

Author's surname, initials (year) *Title of book*. Edition if not first. Place of publication: Publisher.

Neville, C. (2016) *The complete guide to referencing and avoiding plagiarism*. 3rd edn. London: Open University Press.

2. Edited book of essays by different authors

If citing whole book, then in place of authors, cite editor(s).

If one editor:

Editor surname, initials (ed.) (year) *Title of book*. Edition if not first. Place of publication: Publisher.

If more than one editor:

Editor names (eds) (year) *Title of book*. Edition if not first. Place of publication: Publisher.

Barrett, E. and Bolt, B. (eds) (2019) *Practice as Research: Approaches to Creative Arts Enquiry*. New York: I. B. Taurus & Co.

3. Article in an edited book of essays by different authors

Author's surname, initials (year) 'Title of article', in Editor name(s) (eds) *Title of book*. Place of publication: Publisher, page(s).

Elsky, M. (1982) 'Words, things, and names: Jonson's poetry and philosophical grammar', in Summers, C. J. and Pebworth, T. L. (eds) *Classic and*

cavalier: essays on Jonson and the sons of Ben. Pittsburgh, PA: University of Pittsburgh Press, pp. 31–44.

4. E-book

Author's surname, initials (year) *Title of book*. Edition if not first. Available at: URL (Downloaded: date).

Taylor, M. and Mayled, J. (2009) *OCR philosophy of religion*. Available at: https://www.amazon.co.uk/OCR-Philosophy-Religion-AS-A2/dp/0415468248 (Downloaded: 18 March 2017).

Cinema film

Title of film (Year) Directed by director name [Film]. Place of distribution: distributor.

King: Skull Island (2017) Directed by Jordan Vogt-Roberts [Film]. California: Warner Bros.

Concert

Performer (Year performed) [Place. Date].

Led Zeppelin (1972) [Green's Playhouse, Glasgow. 3 December].

Classical music

1. Musical score

If republished work then can also tag on date of original publication.
Composer (Year) *Title* [Musical score]. Additional information. Place of publication: publisher.

Chopin, F. (2009) *Mazurkas* [Musical score]. Edited by Carl Mikuli. New York: Dover Publications. (Original work published 1832)

If viewed online:

Composer (Year) *Title* [Musical score]. Additional information. Available at: URL (Accessed: date).

Kratz, T. (2016) *Joy*. For piano. Available at: https://www.kratz/joy (Accessed: 14 May 2017).

2. Live performance

Composer (Year performed) *Title*. Performed by orchestra name, conducted by conductor name [Place performed. Date seen].

Korngold, E. W. (2017) *Symphony in F sharp*. Performed by the Scottish Symphony Orchestra, conducted by John Wilson [City Halls, Glasgow. 16 March 2017].

Company report

Author or Company Name (Year) *Title*. Place of publication: publisher.

Tesco (2016) *Strategic report*. London: Addison Group.

If viewed online:

Author/Company (Year) *Title*. Available at: URL (Accessed: date).

Tesco (2016) *Strategic report*. Available at: https://www.tescoplc.com/media/264194/annual-report-2016.pdf (Accessed: 10 October 2017).

Conference paper

Author's surname, initials (year) 'Title of paper', *Title of conference*, location, dates of conference. Place of publication: publisher, page(s).

Bloom, J. (2017) 'Picasso turns blue', *Straight from the artist's mouth*, Art Institute, Falkirk, 2–3 March 2015. London: Artbooks, pp. 36–40.

If viewed online:

Author's surname, initials (year) 'Title of paper', *Title of conference*, location, dates of conference, page(s) if available. Available at: URL (Accessed: date).

Conole, G., Oliver, M., Isroff, K. and Ravenscroft, A. (2004) 'Addressing methodological issues in e-learning research', *Proceedings of the Networked Learning Conference*, Lancaster University, UK, 5–7 April. Available at: www.sef.ac.uk/nlc/Proceedings/Symposa4.htm (Accessed: 2 October 2004).

Or (using *et al.*):

Conole, G. *et al.* (2004) 'Addressing methodological issues in e-learning research', *Proceedings of the Networked Learning Conference*, Lancaster University, UK, 5–7 April. Available at: www.sef.ac.uk/nlc/Proceedings/Symposa4.htm (Accessed: 2 October 2004).

Government publication

Author's surname, initials (year) *Title of publication*, Place of publication: Publisher.

Goulding, A. and Cavanagh, B. (2013) *Charges reported under the Offensive Behaviour at Football and Threatening Communications (Scotland) Act in 2012–2013*, Edinburgh: Scottish Government Social Research.

If viewed online:

Author's surname, initials (year) *Title of publication*. Available at: URL (Accessed: date).

Sosenko, F., Livingstone, N. and Fitzpatrick, S. (2013) *Overview of food aid provision in Scotland*. Available at: http://www.gov.scot/Resource/0044/00440458.pdf (Accessed: 23 July 2016).

If author unknown but government department known:

Department name (year) *Title of publication*, Place of publication: Publisher.

Justice Analytical Services (2013) *An examination of the evidence of sectarianism in Scotland*, Edinburgh: Scottish Government Social Research.

If viewed online:

Department name (year) *Title of publication*. Available at: URL (Accessed: date).

Animal Health and Welfare Division (2013) *Promoting responsible dog ownership in Scotland: microchipping and other measures*. Available at: http://www.gov.scot/Resource/0044/00441549.pdf (Accessed: 14 March 2014).

Journal article

Author's surname, initials (year) 'Title of article', *Name of Journal*, volume number (issue number), page(s).

Burns, E. (1994) 'Information assets, technology and organisation', *Management Science*, 40(12), pp. 645–662.

If viewed online, as above but add: Available at: URL (Accessed: date)

Burns, E. (1994) 'Information assets, technology and organisation', *Management Science*, 40(12), pp. 645–662. Available at: https://www.management-science/1994-12 (Accessed: 18 August 2000).

Module material

Tutor name (Year) 'Title'. *Module number: module title*. Available at: URL (Accessed: date).

Biggam, J. (2020) 'Structuring your dissertation'. *D101: writing your dissertation*. Available at: www.inverclyde.ac.uk/dissertations/ (Accessed: 12 June 2020).

Newspaper article

Author's surname, initials (year) 'Title of article', *Name of newspaper*, day and month of publication, page(s).

Riddell, P. and Webster, P. (2006) 'Support for Labour at lowest level since 1992', *The Times*, 9 May, p. 2.

Where the author is not known, then use the name of the newspaper instead:

Name of newspaper (year) 'Title of article', day and month of publication, page(s).

The Indian Agra News (2007) 'Carbon footprints and economic globalisation', 18 April, p. 4.

If viewed online:

Author's surname, initials (year) 'Title of article', *Name of newspaper*, day and month of publication. Available at: URL (Accessed: date).

McArdle, H. (2013) 'Officials say new Forth Bridge on schedule', *The Herald*, 30 December. Available at: http://www.heraldscotland.com/news/13138238.Officials_say_new_Forth_bridge_on_schedule/ (Accessed: 30 December 2013).

Where the author is not known, then use the name of the newspaper instead:

Name of newspaper (year) 'Title of article', day and month of publication. Available at: URL (Accessed: date).

The Herald (2013) 'Officials say new Forth Bridge on schedule', 30 December. Available at: http://www.heraldscotland.com/news/13138238.Officials_say_new_Forth_bridge_on_schedule/(Accessed: 30 December 2013).

Photograph

Photographer (Year) *Title* [Photograph]. Place of publication: publisher.

Eisenstaedt, A. (1945) *The kiss* [Photograph]. New York City: Life.

If viewed online:

Photographer (Year) *Title* [Photograph]. Available at: URL (Accessed: date).

Eisenstaedt, A. (1945) *The kiss* [Photograph]. Available at: http://100photos.time.com/photos/kiss-v-j-day-times-square-alfred-eisenstaedt (Accessed: 27 May 2017).

Play

1. Book

Playwright's surname, initials (year) *Title of play*. Editor. Place of publication: Publisher.

Beckett, S. (2006) *Waiting for Godot*. Edited by Knowlson, J. London: Faber and Faber.

2. Live performance

Title of play by playwright (Year performed) Directed by director name [Place performed. Date seen].

The Steamie by Tony Roper (2013) Directed by Tony Roper [Eastwood Park Theatre, Scotland. 23 October 2013].

Radio

Title of radio programme (Year) Station, date, time.

Bob Harris Sunday (2017) BBC Radio 2, 19 March, 19:00.

Social media

1. Blog

Author (Year site posted) 'Title of article', *Title of site*, date posted. Available at: URL (Accessed: date).

Snowdon, K. (2016) 'Rescuing lions — an exclusive interview with Captured in Africa', *Kate on conservation*, 28 April 2016. Available at: https://kateconservation.wordpress.com/2016/04/28/rescuing-lions-an-exclusive-interview-with-captured-in-africa/ (Accessed: 27 April 2017).

2. Facebook

Author or Title (Year page posted) [Facebook] date posted. Available at: URL (Accessed: date).

University of Liverpool (2017) [Facebook] 20 March. Available at: https://www.facebook.com/UniversityofLiverpool/ (Accessed: 22 March 2017).

3. Twitter

Author (Year of tweet) Actual tweet or start of tweet if long [Twitter] date posted. Available at: URL (Accessed: date).

Spence, J. (2020) So basically the beeb only take complaints seriously if. . . [Twitter] 27 May. Available at: https://twitter.com/jimspencesport (Accessed: 28 May 2020).

4. YouTube

Name of poster (Year video posted) *Title of video*. Date uploaded (if known). Available at: URL (Accessed: date).

Newspoliticsinfo (2015) *Martin Luther King's last speech 'I've been to the mountain top'*. 25 November. Available at: https://m.youtube.com/watch?v=Oehry1JC9Rk (Accessed: 14 January 2016).

Software (computer program, mobile app, video game, etc.)

Author (year of release) *Title* (Version) [Format, e.g. Computer program, Mobile app, Video game, Xbox 360]. Distributor.

Rockstar North (2017) *Grand Theft Auto V – PS4* [Video Game]. Rockstar Games.

If e-software:

Author/publisher (year of release) *Title* (Version) [Format, e.g. Computer program, Mobile app, Video game, Xbox 360]. Available at: URL (Accessed: date).

AGT Technologies (2017) *AVG anti-virus – free* [Mobile app]. Available at: http://www.avg.com/gb-en/antivirus-for-android (Accessed: 8 April 2020).

Television programme

Title (Year broadcast) Channel, date, time.

Dr Who (2014) BBC One, 15 April, 19:30.

Specific episode of a series:

'Episode title' (Year) *Series title*, Series number, episode number. Channel, date, time.

'The Zygon Inversion' (2015) *Dr Who*, Series 9, episode 8. BBC One, 13 November, 19:30.

Theses and dissertations

Author's name, initials (year) *Title of thesis/dissertation.* Level of award. Institution.

Aitken, R. (2008) *Exploring the role of laughter in the workplace.* PhD thesis. Inverclyde University.

If viewed online:

Author's name, initials (year) *Title of thesis/dissertation.* Level of award. Institution. Available at: URL (Accessed: date).

Website

Author's name, initials (year) *Title of web page.* Available at: URL (Accessed: date).

Brender, A. (2004) *Speakers promote distance education to audiences in Asia*. Available at: www.chronicle.com (Accessed: 12 November 2015).

If no author or organisation name, then use title of web page, italicised:

Title of article (year) Available at: URL (Accessed: date).

Distance education in Asia (2004) Available at: www.chronicle.com (Accessed: 12 November 2015).

Referencing your own assignments

In addition, here's how to reference your own assignments in your dissertation. You have two choices. Both use the same format but differ in one respect: in the first choice you also identify the type of assignment (essay, report, undergraduate dissertation, etc.); in the second choice, which adheres to the advice given by Pears and Shields, there is no requirement to identify the type of assignment.

Choice 1: Identifying the type of assignment

Your name (year) 'Title', *Module code: module name*. Institution. Unpublished [type of assignment].

Barker, J. (2019) 'A Study of Student Behaviour in Flat Living', *S300: Sociology*. Inverclyde University. Unpublished dissertation.
Barker, J. (2020a) 'UK Government Reaction to the Coronavirus', *S451: Sociology*. Inverclyde University. Unpublished essay.
Barker, J. (2020b) 'Social Distancing in the UK', *S451: Sociology*. Inverclyde University. Unpublished report.

Choice 2: No need to identify the type of assignment

Your name (year) 'Title', Assignment for *module, degree,* Institution. Unpublished.

Barker, J. (2019) 'A Study of Student Behaviour in Flat Living', Assignment for *S300*, *BSc. Sociology*, Inverclyde University. Unpublished.

Barker, J. (2020a) 'UK Government Reaction to the Coronavirus', Assignment for *S451*, *BSc. Sociology*, Inverclyde University. Unpublished.
Barker, J. (2020b) 'Social Distancing in the UK', Assignment for *S451, BSc. Sociology*, Inverclyde University. Unpublished.

Reference

Pears, R. and Shields, G. (2019) *Cite Them Right: The Essential Referencing Guide*. 11th edn. London: Red Globe Press.

Appendix G: Sample Introduction

• Background • Research focus • Overall research aim and individual research objectives • Outline research methods and timescales • Value of this research

Introduction

1.1 Background

The traditional approach to teaching and learning has, for millennia, rested on the central premise that for instruction to take place, the tutor and student co-exist in the same place at the same time. Aristotle's lectures, preserved in the writings of Plato, are examples of such an approach, where the student is educated on particular topics through the mechanism of illuminating conversations – *dialogues* – between tutor and student (Taylor, 1955). However, few universities have the generous resources required to support one-to-one tuition as the prevailing mode of educational delivery; rather, the common method consists of a combination of lectures, seminars/tutorials and, where appropriate, laboratory work; where each of the aforementioned ways of imparting knowledge involves face-to-face instruction and discussion.

Information and Communication Technologies (ICT) are used frequently to support the traditional teaching and learning paradigm. Academic staff use technology for example to prepare and deliver lectures, as well as for administrative purposes. Haywood *et al.* (2004) believe that students arrive at university with high expectations that they will have access to modern technology. Universities have also moved rapidly to acquire dedicated software platforms that allow them to offer educational programmes free from the shackles of time and place (Farrell, 2001), with Moe and Blodget (2000, p. 104) emphasising that 'the next big killer application for the Internet is going to be education'.

Online learning, networked learning, distributed learning, flexible learning, virtual learning, are some of the terms used to describe learning that uses technology as a vehicle for educational delivery (Salmon, 1998; Britain and Liber, 1999; Jung, 2000; Collis and Moonen, 2001; Rosenberg, 2001). Another, more commonly used term is *e-Learning* (Ryan, 2001; Sloman and Rolph, 2003). Tearle *et al.* (1999, p. 14) urge universities to engage with e-Learning,

particularly for distance learning, and warn that 'it is no longer possible to opt out'. As early as 1997, the Dearing Report foresaw the benefits of using ICT in higher education:

> *. . . we believe that the innovative application of . . . C&IT holds out much promise for improving the quality, flexibility and effectiveness of higher education. The potential benefits will extend to, and affect the practice of, learning and teaching and research. (Dearing, 1997, 13.1)*

It is not difficult to find examples of universities responding to the call to develop e-Learning initiatives. FutureLearn, a private company owned by the Open University, offers free, high calibre, online courses. FutureLearn's partners and educational contributors are wide-ranging and include, among other prestigious institutions, Shanghai Jiao Tong University, Trinity College Dublin, the University of Auckland, the University of Glasgow, the British Council, the British Library and the British Museum. The Centre for Instructional Technologies, a unit of the Division of Instructional Innovation and Assessment at The University of Texas at Austin, has embraced enthusiastically the concept of e-Learning by creating an online 'World Lecture Hall', whereby online course materials are provided free to any interested parties, who, in turn, can also contribute new material if they wish.

Technological advances, however, increasingly present a serious and genuine challenge to the traditional teaching and learning model (Collis and Moonen, 2001; Laurillard, 2002). Tomei (2004), for example, highlights the impact of online teaching on academic staff 'load', warning that the ideal class size for online teaching ought to be twelve students. Jones *et al.* (2004) point out that e-Learning students expect staff to respond expediently to their online queries, and no later than 48 hours. Hodges (2004) argues that e-Learning tutors need to incorporate techniques to motivate students involved in subjects that are delivered through e-Learning. Increased staff workload, response times and online motivational techniques are some of the issues that academic tutors involved in e-Learning ought to be trained to cope with, particularly if they are new to making the transition from teaching and learning in the traditional environment to one where e-Learning technologies are to be used.

E-Learning environments are changing the role of the university tutor, where tutors need to learn to become guides and facilitators, rather than the main source of knowledge, as in the traditional teaching and learning environment, with Salmon (2000) underlining that such a transition requires new skills, including time management skills, the ability to monitor the student learning process, and the skill to change teaching methods to meet the needs of e-Learning students.

1.2 Research focus

There is some confusion about the benefits of e-Learning. Serious issues are being raised concerning possible barriers to the successful adoption of

e-Learning. For example, there have been concerns over student drop-out rates (Flood, 2002), inadequate IT infrastructures to support e-Learning (Cowan, 2004), and the need to ensure that e-Learning software facilities can accommodate students with disabilities (UK eUniversities Worldwide, 2003). Massey (2002), in a European survey on quality and e-Learning, lamented that only 1 per cent of respondents – a mixture of Higher Education (HE) teachers, Further Education (FE) teachers, HE and FE managers, and private trainers – rated the quality of e-Learning courses as excellent, with 61 per cent of all respondents rating the overall quality of e-Learning negatively.

In particular, e-Learning commentators are warning that academic staff in universities need to be prepared to cope with e-Learning, to make the shift from *sage on the stage* to *guide on the side*. The Dearing Report (1997, 13.2) bluntly stated that 'the concept of the higher education experience will need to be altered radically', complaining that many academics had little experience of the use of ICT as an educational tool. Laurillard (2001) argues that e-Learning requires new skills to deal with new pedagogy. Straub (2002), the director of eLearning Solutions and chairman of the European eLearning Industry Group, complains that 'e-learning [is not] taking off [in Europe] in our daily lives – in schools, companies and universities', concluding that key reasons for this include, *inter alia*, the lack of 'professional development of educators' and a failure to engage 'new pedagogy'.

Critical to this study is an understanding of the type of support that is required to prepare academic staff from making the change from *sage on the stage* to *guide on the side*, the type of support that is available to prepare staff for e-Learning, and what recommendations can be made to help improve existing support frameworks. Understanding how academic staff are being prepared for e-Learning, and their views on their preparation experiences, is therefore an area worthy of study and one that would contribute knowledge to the e-Learning research community. A critique of staff preparation models/frameworks, including staff views on their own experiences, will form a central plank of this research.

The importance of research in this field of e-Learning becomes even more apparent when other researchers mourn the lack of research in this area. Vermeer (2000, p. 329) complains of too little research of staff experiences in e-Learning and that much commentary is anecdotal in nature, mainly coming from 'the enthusiasm of the recently converted', while Coppola *et al.* (2001, p. 96) urge that 'there is a critical need for study of faculty experiences'; and as far afield as New Zealand there is a national priority for 'more research into the effectiveness and theoretical base of e-learning' as a result of practitioners 'finding their progress restricted by the lack of available research into e-Learning' (Ministry of Education, 2004, p. 1).

If academic staff do not accept the educational benefits of e-Learning, then they may be less likely to be willing participants in e-Learning initiatives, irrespective of the professional nature of staff training programmes. Schneckenberg (2009) argued that there is a need to understand the staff barriers to meaningful involvement in e-Learning, citing staff motivation as an example.

As such, it makes sense as part of the study of academic staff preparedness for e-Learning, to clarify the university drivers for e-Learning (and how they are communicated to academic staff) and the main barriers to academic staff becoming involved in e-Learning.

To gain a deeper understanding of these issues related to academic staff preparation, two main activities will need to be tackled: a review of relevant literature to ascertain current research findings on e-Learning preparation issues, including drivers and potential barriers; and empirical data collection on academic staff experiences of preparing for e-Learning.

1.3 Overall research aim and individual research objectives

The overall aim of this research is to advance an understanding of the issues surrounding the preparation of university academic staff to support student e-Learning. Within the context of higher education, the specific objectives of this research are to do the following:

1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
4 *Formulate* recommendations on staff preparation issues.

It would be difficult to comprehend how staff ought to meet the challenge of e-Learning without knowing the drivers behind e-Learning or the potential barriers, both strategic and personal; and given the confusion between those who predict an exponential e-Learning utopia and those who raise some concerns, it is all the more important to try and clarify e-Learning drivers and barriers (objective 1). To improve staff preparedness for e-Learning it is necessary to understand and assess existing guidelines supporting staff and student needs (objective 2). Theory is important but to gain a meaningful insight into what staff think of how they are being prepared to cope with e-Learning, it is necessary to explore their experiences and views (objective 3). The ultimate point of this dissertation is to make recommendations on the findings (objective 4).

1.4 Outline research methods and timescales

This research will depend on a review of pertinent literature (objectives 1 and 2) and the collection of empirical data through a case study (objective 3). The secondary data (i.e. literature review) will largely come from journals (e.g. *International Journal of e-Learning*); conference proceedings (e.g. Online Educa); seminal books (e.g. Laurillard, 2009) and recent surveys. The following

Table 1 Breakdown of dissertation timescales

Dissertation activity	Duration (in weeks)	Month
Clarify aim/objectives	2	June
Literature Review	4	June–July
Research methods	2	July
Data collection	3	August
Findings	3	August–September
Conclusion	2	25 September

library databases will, in particular, be used to support this research: ERIC, British Education Index (ProQuest) and JSTOR.

The primary data (i.e. empirical data) will be collected through a case study. A case study is a study of a single unit (Cohen and Manion, 2005), allowing exploratory research in depth (Yin, 2003). The case unit will consist of an academic department within Inverclyde University. The means of collecting the primary data will be based on an initial questionnaire to academic staff from which a subset of the target population will be subject to a detailed follow-up interview. In addition, a number of *elite staff* – those responsible for the success of e-Learning and staff training – will be interviewed. The combination of a literature review and empirical research will allow theory and practice to be compared, from which a rich picture of academic staff preparation should emerge.

This research does not aim to generalise the status of staff preparation in e-Learning but, instead, seeks an in-depth understanding of the elements that constitute e-Learning preparation, including drivers and barriers. Hence the use of a case study to support an extensive literature review.

Table 1 shows the expected timescales for this dissertation proposal, from finalising initial research objectives to submission of dissertation.

Full details of the research methods used for this research, including justification for the chosen methods, can be found in the Research Methods chapter.

1.5 Value of this research

This research will benefit the academic research community by contributing to the field of e-Learning in the area of academic staff preparation. The results of this work – secondary and primary data – can be used to enrich existing research schemas, particularly in relation to staff preparation models/frameworks and staff views, thus adding incrementally to the knowledge base of e-Learning research.

Although the output from this research work cannot be generalised, nonetheless the literature review findings and the empirical case study can act as a focus to inform elite staff in universities on potential staff e-Learning preparation issues, encouraging management to revisit how they prepare

academic staff to engage fully with e-Learning. Other beneficiaries include: academic staff themselves who will gain from recommendations that reflect their concerns on support issues; and, ultimately, students. If staff are better prepared to deliver e-Learning programmes, then that augurs well for the student experience.

This work will raise the profile of an area of educational delivery – e-Learning – that Vermeer (2000, p. 329) once decried had often been dependent on 'the enthusiasm of the recently converted' for its success. Technology is increasingly at the heart of university education and this research will benefit all those with an interest in ensuring that technology is exploited by fully trained academic staff. The next chapter – Chapter 2 Literature Review – examines literature pertinent to the objectives of this research, beginning with an investigation of what is meant by the term *e-Learning*.

Appendix H: Sample chapter outline

Outline structure

Chapter 1: Introduction

This chapter provides the reader with *background* information on the impact of e-Learning on the traditional teaching and learning paradigm in the university environment, including an illustration of some drivers and barriers and the need for an understanding on how staff are being prepared to make the switch from *sage on the stage* to *guide on the side*. The *focus* of this research is discussed and justified and the *overall research aim* and *individual research objectives* are identified. *Research methods and timescales* are outlined, as is the *value of this research*.

Chapter 2: Literature review

This chapter *defines* the term e-Learning, discusses *distance learning* (a driver for e-Learning), clarifies the *drivers* for e-Learning (including major reports, strategic forces, and the benefits of e-Learning to different stakeholders), explores *barriers* to e-Learning, evaluates *guidelines and models* on e-Learning support infrastructures in relation to providing support for academic staff preparation, and *justifies the need for empirical data* on academic staff preparation issues.

Chapter 3: Research methods

This chapter discusses and justifies the *research strategy* (a case study) and *data collection techniques* (centred on structured interviews) to be adopted in the empirical collection of data for this study. Details on the *site and sample* are provided, together with a *framework for analysis* of the qualitative data. In addition, the *limitations* of the adopted approach to this research are discussed, in terms of validity and reliability, as well as *potential problems* related to implementing a case study at Inverclyde University.

Chapter 4: Case study results: academic staff; elite staff

This chapter reports on the findings from the case study. In the first instance, the results of the *interviews with academic staff* are discussed (under the themes: Drivers, Barriers, Preparation, IT Infrastructure, Academic Staff Motivation, and Reflections and Future Directions); next, the findings from *interviews with elite staff* – university staff with an influence on the shape and direction of e-Learning in the institution under study (mainly senior

management) – are discussed. It is in the section on the elite staff findings that *analysis and synthesis take place*: the empirical findings from both stakeholder groups (academic staff and elite staff) are analysed against each other and then synthesised, once again in terms of soft comparison and contrast, against the findings from the literature review. Thus, this chapter describes, discusses, analyses and synthesises the empirical findings and the findings from the literature review.

Chapter 5: Conclusion

This chapter revisits the overall aim and specific objectives of this research study. The *findings are summarised* against each of the stated objectives. *Conclusions* from this research work are derived and linked to the research objectives, and based on these conclusions, *recommendations* are made. The *limitations* of this work are also highlighted. Importantly, the issue of *managing* the implementation of the recommendations is addressed. The *contribution of this research to knowledge* is also clarified. Lastly, a section on *self-reflection* is included, providing the reader with a personal reflection on the process that has been undertaken to complete this work.

Chapter 6: References

This chapter contains an alphabetical listing of the sources referred to in this work. The Harvard system of referencing (author-date system) is used.

Appendix I: Sample Literature Review introduction

Sample introduction to a Literature Review

Chapter 1 placed this research in context and identified four research objectives for this dissertation. This review of literature focuses on objectives 1 and 2 below. Objective 3 will be completed through an empirical study, while objective 4 will be based on the combined findings of the Literature Review and the findings from the empirical study.

1 ***Identify*** **the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.**
2 ***Evaluate critically*** **models and frameworks relevant to supporting academic staff in coping with e-Learning.**
3 *Explore* staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.
4 *Formulate* recommendations on staff preparation issues.

By exploring the above areas of literature – e-Learning drivers/barriers and formal models/frameworks to support academic staff – a significant contribution will be made to this research. In effect, this will allow a meaningful discussion and analysis of e-Learning, in a structured way, to answer fundamental questions of why and how staff are being prepared for e-Learning, thus preparing important groundwork prior to gaining the views of staff in objective 3.

In the first instance, a sensible starting point is to investigate what is meant by the term *e-Learning*.

Appendix J: Sample Literature Review conclusion

Emerging issues and the need for empirical research

The study of relevant e-Learning literature revealed that e-Learning is a complex and moving landscape. To begin with, there was no agreed definition of e-Learning. One was produced by the author of this dissertation, highlighting connectivity, support infrastructures, and flexibility of access and delivery.

Although there were many strategic drivers (perceived reduced costs, access to global markets, increased students, etc.) and potential educational benefits to staff and students (such as: flexibility, independent learning, and job opportunities), there were also many barriers that were identified that could impact on universities and staff contemplating involvement in e-Learning: staff resistance, concerns over student drop-out rates, student inability to cope with independent learning, opposition to globalisation, access to support facilities, inadequate student support infrastructures and, crucially, lack of staff preparation to cope with e-Learning.

The review of literature stressed the need to have in place an infrastructure to support academic staff. There was concern that universities may not train their staff properly. Meaningful guidelines were identified as a necessary prerequisite to preparing academic staff for e-Learning environments. However, the guidelines and models that were available, although useful in part, tended to concentrate on the needs of students or, where advice on preparing staff for e-Learning was given, were mainly skeletal and general in nature with relatively little advice based on academic staff experiences.

There is a continuing need for empirical data on how academic staff are preparing for e-Learning, and the aforementioned review of literature supports this claim. Empirical research will now be carried out to find out how academic staff are preparing for e-Learning in practice, what motivates them to do so, and, from a wider perspective, the drivers and barriers acting on the university environment in relation to developing e-Learning programmes. The next stage of this research will detail the research methods to be used to capture this data, including details on the research strategy, data collection techniques, sample selection, and management of the researcher's role.

Appendix K: Punctuation refresher

Full stop (.)

Marks the end of a sentence:

The Coronavirus took the world by surprise.

Comma (,)

Separates items in a list:

Robert stuffed himself with chocolates, crisps, and cake.

Placed after 'linking' words at the start of a sentence – such as *however*, *yet*, and *on the other hand* – to pause for effect:

Yet, there is an alternative theory.

In direct speech before the closing quotation mark:

'No,' said Jane.

In direct speech before the opening quotation mark:

Tom blurted out, 'It was him, not me.'

Oxford comma (, and)

Avoids ambiguity in a list by placing a comma before the word 'and' at the end of a list:

Example 1 (comma): In the pub were the clowns, John and Alan.

Example 2 (Oxford comma): *In the pub were the clowns, John, and Alan.*

The first example is ambiguous. It either means that the clowns were in the pub with John and Alan or it means that John and Alan were the clowns in the pub. The use of the Oxford comma in the second example makes it clear that there were three entities in the pub: the clowns and John and Alan.

Colon (:)

To introduce a list:

Glasgow is famous for three reasons: its parks, its pubs, and its people.

To explain or expand on something:

Clarke's computer model was unreliable: it gave different results using the same data.

To introduce a quotation:

As Fotheringham (2020, p. 16) said: 'The less time you have, the more important it becomes.'

Semi-colon (;)

To separate items in a list where a comma appears in one of the items:

He mentioned his three favourite paintings: Le déjeuner sur l'herbe by Édouard Manet, painted in 1863; L'Absinthe by Edgar Degas, painted in 1876; and Boulevard Montmartre by Camille Pissarro, painted in 1897.

To link complete sentences that are closely related:

Beer made him belch; cider made him sleepy.

Hyphen (-), the en sign (–), and the em sign (—)

The hyphen is shorter than the en sign and the en sign is shorter than the em sign.

The **hyphen** is used to connect words:

It was a hard-fought battle.

The **en sign** is used to connect numbers:

Capacity: 45–50.

The **em sign** is used to interrupt a sentence:

Two of the girls — Kathryn and Norma — were thrilled at the invitation.

The **em sign** is also used as a pointer to a comment:

Rodgers was loved by the fans — or so he thought.

The em sign (—) is decreasing in usage. It is more common now to use the en sign (–) not only for numbers, but also to interrupt a sentence and as a pointer to a comment.

Oblique (/)

Used to present alternatives. Equivalent to *or*:

If/when that happens, we must be prepared.

To show additional meaning. Equivalent to *and*:

She needed to find a way to escape her home/prison.

To stand for *per*:

The job paid a miserly £5/day.

Question mark (?)

When asking a question:

Surely that is the case?

Exclamation mark (!)

To express strong feeling:

I hate school!

Within round brackets to emphasise a word:

To think that John (!) turned out to be the hero.

Round brackets (). Also known as parentheses.

To provide additional information.

There is a caveat: the sentence outside the brackets must make sense on its own:

Example 1: Kay was an expert weaver (a skill that she learned from her mother).

Example 2: *The PM (and his family) were late for the banquet.*

The first example shows the proper use of round brackets because the sentence outside the brackets still makes sense: *Kay was an expert weaver.*

The second example shows the improper use of round brackets because the sentence outside the brackets does not make sense: *The PM were late for the banquet.*

Square brackets []

To clarify something to the reader:

Eileen [his sister] led a quiet life.

Used with *sic* (thus) to indicate a mistake not of your doing:

Davis (2021, p. 10) complained that 'poverty is their [sic] for all to see'.

Quotation marks (‘’ or “”)

British English favours ‘’.
American English favours “”.
Whichever set you use, be consistent.

Apostrophe (’)

Used for contractions:

here's, he's, isn't, can't.

Used for possessives:

Singular possessives: John's ball, the girl's coat.

Plural possessives: The boys' rules, the girls' games, the men's room, the ladies' room.

It's and Its

It's is a contraction of *it is*.
Its, on the other hand, refers to ownership. *Its leg was broken.*
If you are confused about which one to use, try *it is* in the sentence. If it makes sense, then *it's* (or *it is*) is the one you want to use.

Example 1: It's all right to cry. ✓

Example 2: Its alright to cry. ×

Example 3: Its sore paw made me cry. ✓

Example 1 makes sense because It's = It is, and that makes sense in the sentence, *It is all right to cry*.
Example 2 does not make sense because *Its* refers to ownership.
Example 3 makes senses because *Its* refers to a sore paw. *It's sore paw made me cry* would not make sense because *It's sore paw made me cry = It is sore paw made me cry*, which is nonsense.

Appendix L: Record of literature search

Source document aide-mémoire

REFERENCE:
SUMMARY:
COMMENT:

Example record of source document

REFERENCE:
Bothwell, E. (2017) 'Pen and paper beats computers for retaining knowledge', *Times Higher Education Magazine,* 13 February. Available at: https://www.timeshighereducation.com/news/pen-and-paper-beats-computers-retaining-knowledge (Accessed: 15 February 2017).
SUMMARY:
Article about a recent survey report of 650 students from 10 countries by Jane Vincent, visiting fellow of LSE, titled *Students' use of paper and pen versus digital media in university environments for writing and reading*. Author concludes that 'handwritten notes leads to greater retention of data than if it is typed'.
COMMENT:
Unclear how central thesis – pen and paper is better for retaining knowledge than use of technology – has been tested. No details in article of testing mechanism. Need to access full report! Question: does the report test how well students have retained knowledge with/without paper/technology? What was the testing criteria? Over what time scale? Same students? How was 'knowledge' defined? Furthermore, report appears to be more nuanced than article heading suggests. For instance, students from different countries had conflicting views, e.g. Russian students favoured technology over paper while Chinese students preferred writing by hand. Even where students from different countries had same preferences, the reasons sometimes differed, e.g. Chinese students felt that they had more freedom to express themselves when writing by hand whereas Italian students liked the feel and smell of paper.

Appendix M: Sample Research Methods chapter

• Introduction • Research strategy • Data collection • Data collection techniques • Data analysis • Limitations and potential hurdles

Research Methods

INTRODUCTION

The Literature Review highlighted the need for empirical data on university staff preparing for e-Learning including drivers and barriers (to be covered in objective 3 below). This chapter will provide the details of the main research strategy to be adopted to meet this objective, together with details on how data will be collected, including site and sample selection, and how the collected data will be analysed. In addition, limitations of this work, and potential hurdles, will be identified and addressed.

1 *Identify* the forces driving e-Learning and the barriers to the successful delivery of e-Learning programmes.
2 *Evaluate critically* models and frameworks relevant to supporting academic staff in coping with e-Learning.
3 ***Explore staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.***
4 *Formulate* recommendations on staff preparation issues.

Comparing theory with practice – i.e. comparing the Literature Review findings with the 'real world' – will allow the researcher to gain a fuller understanding of the issues surrounding the implementation of e-Learning and so be better placed to contribute useful knowledge in relation to e-Learning in the university environment and thus formulate recommendations on staff preparation issues (objective 4).

By setting out the research methods in a detailed, methodical and transparent way, other researchers will be able to judge the validity of the chosen research methods and, if they so wish, to replicate the same research in other institutions.

RESEARCH STRATEGY

The research strategy that will be used to implement the empirical research is a case study. What is a case study approach and why is it

suitable for this research? Cohen and Manion (1995, p. 106) describe a case study thus:

> *the case study researcher typically observes the characteristics of an individual unit – a child, a class, a school or a community. The purpose of such observation is to probe deeply and to analyse intensively the multifarious phenomena that constitute the life cycle of the unit.*

According to this definition, a case study is therefore concerned with close observation of how a particular population group in a particular setting behave in a particular context. These criteria perfectly meet the needs of this research. In the first instance, the 'individual unit' under study is one university. Second, the 'multifarious phenomena' in question focuses on staff views and practices on e-Learning preparation. Third, the purpose of research objective 3 is to 'explore' these views and practices or, in Cohen and Manion's words, to 'probe deeply'.

Yin (2003, p. 13), though, defines a case study in a different way:

> *A case study is an empirical inquiry that*
>
> - *Investigates a contemporary phenomenon within its real-life context, especially when*
> - *The boundaries between phenomenon and context are not clearly evident.'*

Does this empirical research meet Yin's two-pronged definition of a case study? With reference to his first condition – *Investigates a contemporary phenomenon within its real-life context* – e-Learning is a contemporary issue, as evidenced in the Literature Review. The study will also take place in a 'real-life context', in this case a university.

In terms of Yin's second criterion – that the *boundaries between phenomenon and context are not clearly evident* – it is difficult to compartmentalise e-Learning and learning in a higher education institution and to know when one begins and the other ends, particularly, as the review of literature showed, when there is confusion over what is meant by the term e-Learning.

Although this research meets Yin's second condition – *the boundaries between phenomenon and context are not clearly evident* – it seems likely that Yin's second condition has more to do with emphasising the interpretative/constructivism view of the world than insisting that complexity of environment is a necessary condition that needs to be satisfied to justify the use of a case study as a research strategy. In any case, the university environment is a complex environment and one that encompasses different stakeholder perspectives and interest groups.

The facets of case study strategy, regardless of nuances in definition, match the aim of objective 3 of this research: to implement an in-depth exploratory study of staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers, focusing on a specific unit of analysis (a team of

academic staff preparing for e-Learning for a particular programme), but obtaining other stakeholder views in recognition that a university is a complex environment and academic staff views require to be placed in context.

This research is also interested in comparing what was discovered in the Literature Review with the results of a case study. Saunders *et al.* (2000, p. 92) believe that a case study approach meets that objective: 'we would argue that case study [*sic*] can be a very worthwhile way of exploring existing theory and also provide a source of new hypotheses'. Although the intended output of this research is not a set of 'new hypotheses', it is nevertheless worthwhile in that existing theory (found in the Literature Review) will be compared against the behaviour of one institution and, as a result, an improved understanding – rather than 'new hypotheses' – will be developed to aid universities in their quest to prepare academic staff for e-Learning.

DATA COLLECTION

Where will you get your data from?

The case study site will be Inverclyde University. It is a relatively new university in Scotland. The university was created in 1993, shortly after the binary divide between universities and polytechnics was removed. It has three Schools: Inverclyde Business School, Inverclyde Health School, and Inverclyde Science School. It has quickly established a reputation for its social inclusion policy, serving the needs of the local community, and its innovative approaches to teaching and learning.

The Commission of the European Communities (2002, p. 5) lamented that the 'most successful players [in e-Learning initiatives] to-date, however, remain the well-established and prestigious institutions'. Selecting a case study that is neither an 'ancient' university nor a 'redbrick' university, but one that has been created in relatively recent times, helps fill a gap in existing research.

This case study is not intended to be an exhaustive study of all the e-Learning initiatives operating in Inverclyde University. Such a study, in order to produce meaningful results, would be enormously time-consuming and require a team of researchers, and is therefore outwith the scope of this dissertation.

Instead one postgraduate study programme within Inverclyde Business School will form the basis of this study. In a report entitled *The International Postgraduate: Challenges to British Higher Education*, the UK Council for Postgraduate Education (1999) raised the issue that evidence of staff e-Learning experiences with postgraduate students was from 'anecdotal' sources. This study, once again, meets a need for empirical data in an area previously lacking in research.

The postgraduate programme will be from a division within the Inverclyde Business School (IBS). Specifically, eight academic staff involved in preparing module material for Blackboard usage on the China suite of postgraduate programmes in E-Business, Knowledge Management and Management of Information Systems. This will allow a focused, achievable approach to the study, giving academic staff the opportunity to express detailed views on e-Learning preparation.

To gain a wider perspective, a number of *elite* staff – staff with influence, and who are well-informed in the organisation – outwith division X will also form part of this research:

- the Principal and Vice-Chancellor are included to give a strategic perspective on e-Learning;
- the Dean of the Inverclyde Business School (IBS) to capture a School/Faculty view of e-Learning issues;
- the Head of Division X responsible for the staff on the postgraduate programme;
- the Pro Vice-Chancellor of Learning and Information Services will be part of this study, given their over-arching role to achieve strategic objectives related to the use of ICT;
- the C&IT Fellow located in IBS – someone with direct responsibility for encouraging and supporting e-Learning initiatives in IBS wherein Division X is located – will also be included.

This thick view of e-Learning will be enhanced further by including members of those who have a role in best teaching practices within IU:

- the Head of the Academic Practice Unit (APU); and
- a member of the Teaching and Learning Team (LTAS).

In summary, empirical data will be obtained from academic staff involved in the field of e-Learning preparation, from staff in the e-Learning Innovation Support Unit, as well as staff with a specific role in offering guidance and strategy on teaching practice; and, for a wider management perspective, data will be captured from the Head of X, the Dean of IBS and the Principal and Vice-Chancellor.

Figure M.1 illustrates the stakeholder groups that will form the units of research for this IU Case Study on e-Learning.

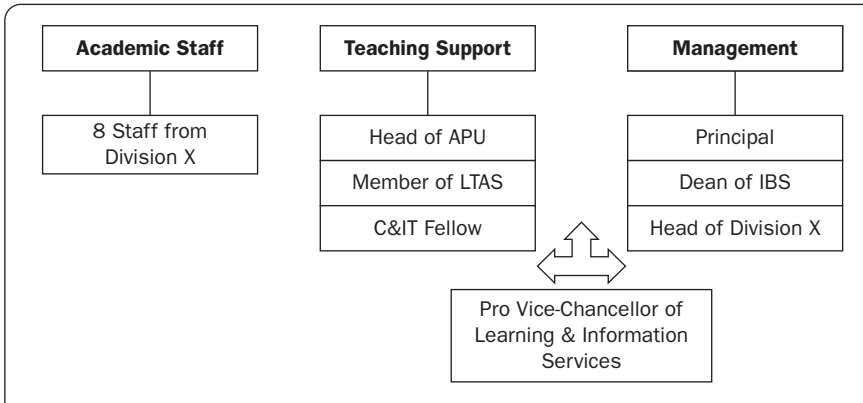


Figure M.1 Inverclyde University (IU) research units

Convenience sampling was used to select both the university and the post-graduate programme. It is convenient because the researcher is a student at, and works in, the university. This means that the subjects under study have not been chosen at random and so there can be no claim to achieving representative views related to the broader university community. Instead, this research has as its focus the aim of achieving an in-depth, qualitative insight into e-Learning preparation issues. The review of relevant literature established that e-Learning is an area of increasing interest in the wider university community and so the results of this study will be of interest to those grappling with similar staff preparation issues. Convenience sampling is also used because of time issues and easy access to research subjects.

How will you collect your data?

Qualitative data will be obtained primarily through the vehicle of interviews. Staff from the following two groups will be interviewed: academic staff from Division X and *elite* staff, i.e. staff with influence on the direction of e-Learning within the university (see below). The interviews will be recorded, where possible, for two reasons: to ensure that the analysis of data is based upon an accurate record (e.g. transcript) and to allow the interviewer to concentrate on the interview.

Group 1 Division X

- Eight academic staff

Group 2 *Elite* staff

1 Principal and Vice-Chancellor of Inverclyde University (**IU**)
2 Pro Vice-Chancellor of Learning and Information **Services**
3 Head of Academic Practice Unit (**APU**)
4 The Dean of the Inverclyde Business School (**IBS**)
5 The Head of Division **X**
6 Member of Learning and Teaching Strategy (**LTAS**) Team
7 C&IT **Fellow**

By selecting a variety of e-Learning stakeholders, from those involved in e-Learning preparation and delivery (academic staff), those charged with strategic decision-making (1, 2, 3 and 4), those with an input to training academic staff (2, 5 and 6), those involved in providing IT Support (2 and 4) and learning and teaching advice (3, 6 and 7), and by selecting a Division that has recent experience of implementing an e-Learning strategy, it is expected that an enriched understanding of e-Learning will emerge, one that will better inform the e-Learning process and assist in the development of improved guidance to support those faced with implementing e-Learning: academic staff.

Why interviews? This research is interested in capturing qualitative data. As such, the use of postal or email questionnaires, although useful in gathering quantitative data, would not satisfy the researcher's desire to explore staff on their experiences of, and views on, e-Learning (the purpose of research objective 3). That, in turn, would make it difficult for the researcher to compare and contrast the findings in any meaningful way with the findings from the literature review. Any advice on a way forward on preparing academic staff for e-Learning would be significantly weakened by the lack of qualitative data from a case study.

Interviews open the opportunity to discuss, with the various stakeholders, e-Learning issues in depth. However, in order to establish a framework around the interviews, and to focus on specific issues with different interviewees, the interviews will be structured with questions prepared beforehand, but the interviewer will be open to new issues and follow different, associated leads depending on the responses and willingness of the interviewee. Qualitative interviewing using structured questions and making use of open-ended questions – such as, for example, 'What do you consider to be the benefits, if any, of e-Learning?' – will encourage focused and meaningful discussion (Patton, 1990).

The questions will be grouped within themes related to e-Learning:

- Drivers
- Barriers
- Preparation
- IT Infrastructure
- Academic Staff Motivation
- Reflections and Future Directions.

Both groups will be asked questions under these themes. This will allow for comparison of responses. These themes explicitly address the requirements of research objective 3: *To Explore staff stakeholder views and practices related to e-Learning preparation, including drivers and barriers to e-Learning.*

Secondary data, in the form of university documents and academic staff teaching and learning material, will also be collected to form part of the analysis. The secondary data will come from a variety of documented sources:

- University Strategic Plan
- IBS Plan for 2002/03–2005/06
- Division X's Strategic Plan
- Learning, Teaching and Assessment Strategy (LTAS) 2000–2004
- APU E-Learning Strategy.

The secondary data, coupled with the interview data, will assist in providing a rich picture of e-Learning in the university by facilitating a comparison of the stated University/Business School/Divisional objectives against staff perceptions, at various levels within the institution.

Table M.1 Case study: breakdown of themes and questions

Theme	Academic staff questions	Elite staff questions
X. e-Learning Strategy	—	10
A. Drivers	5	5
B. Barriers	5	5
C. Preparation	10	4
D. IT Infrastructure	2	6
E. Academic Staff Motivation	6	3
F. Reflections and Future Directions	3	3

Table M.1 reveals the breakdown of questions under each theme for academic staff and elite staff. An additional theme – e-Learning Strategy – is included for elite staff, to reflect their role in the strategic shaping and delivery of e-Learning.

Appendix A contains the collection of structured questions to be used for the academic staff; Appendix B contains the actual interview transcripts of interviews with academic staff; and Appendix C contains the questions and transcripts of interviews with elite staff.

DATA ANALYSIS

As stated previously, the data from academic staff and elite staff will be collected under themes pertinent to preparing academic staff to cope with the delivery of e-Learning: drivers, barriers, preparation, IT infrastructure, academic staff motivation, with advice on moving forward. In addition, senior staff will be questioned on strategic matters.

The themes will help staff to focus on interview questions but it also facilitates data analysis. It will make it easier for responses within and between groups to take place. The themes have not been chosen at a whim: they reflect the issues raised in the Literature Review. This means that the responses from the research subjects can also be compared with the findings in the Literature Review under each theme.

Figure M.2 illustrates graphically the approach that will be adopted to analyse data from the case study.

Essentially, there will be a two-pronged approach: first, academic staff case study findings will be described and that data interpreted; second, elite staff case study findings will be described and the data interpreted, not only comparing elite staff findings against each other, but also comparing elite staff findings against academic staff findings. Analysis of qualitative data is not a linear activity: it requires an iterative approach to capturing and understanding themes and patterns (Miles and Huberman, 1984; Creswell, 1997).

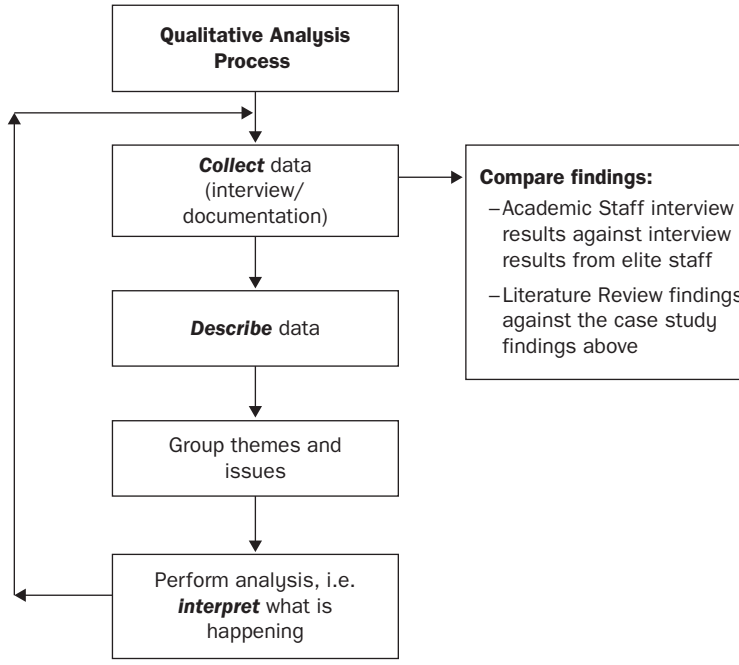


Figure M.2 Qualitative data analysis process for Inverclyde University case study

An example of a basic description would be of the nature, 'Of the 8 academic staff questioned on e-Learning barriers, 7 said this . . . and 1 said this . . .'. Analysis involves placing an interpretation on the data that has been described. An example of analysis would be of the form 'It is clear that academic staff believe that a main barrier to e-Learning participation by academic staff is . . .'.

However, it is in the second phase that, as well as comparing elite staff findings against academic staff findings, relevant Literature Review findings will also be compared and contrasted against the case study findings, thus synthesising theory (i.e. what the Literature Review told us) with practice (i.e. what those in the field told us).

The essence of this qualitative analysis paradigm reflects accepted practice in dealing with qualitative data, and is perhaps more succinctly described by Bogdan and Biklen (1982, p. 145) as 'working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others'.

How will the data be recorded? Taking notes as respondents talk is one approach. However, the disadvantage of having to write as respondents are talking, and so failing to give respondents your full attention and, in turn, perhaps omitting crucial comments and nuances, together with the problem of

having to interpret summary comments some time after the event, in the end made this mode of recording unsuitable.

Instead, permission will be sought to record all interviews 'on tape' and have them transcribed. Such an activity will prove time-consuming, but the resulting data will aid in the researcher's aim of gathering enriching, qualitative data. Overriding advantages include the freedom to concentrate on the interview process and, crucially, the capture of everything said by the respondents. As each interview will be structured under the themes mentioned earlier (Drivers, Barriers, etc.), the transcriptions for each interview will not form one mass of oral text, but rather be categorised under pre-determined topics and sub-topics, in turn aiding the analysis phase.

LIMITATIONS AND POTENTIAL HURDLES

There are limitations to this research in relation to the research strategy chosen, main data collection technique – interviews – as well as some practical hurdles to overcome. For convenience they are numbered below:

1 As with all case studies, the results of this study cannot be generalised to the wider research community (Adelman *et al.*, 1977; Borg, 1981); in this case, to how other universities prepare for e-Learning.
2 Next, there is the question of depending on a data collection technique – interviews – that relies on personal opinion, and so can be susceptible to bias and inaccuracy. Even more problematic, how can the researcher maintain *objectivity* when he interviews colleagues in an environment where he works?
3 The data analysis will also present a challenge: making sense of qualitative data is not easy.

The points below address each of these limitations and potential hurdles:

1 The choice of a case study is valid because it meets the aim of this research: to study a phenomenon (e-Learning) in depth. It is a tried and tested research strategy appealing to the concept of *relatability* rather than *generalisability*, i.e. other universities involved in e-Learning can relate to the issues highlighted and therefore benefit from the findings. Furthermore, as other researchers implement case study research in this area, trends will then appear, in turn allowing generalisations to be made (Nunes and McPherson, 2002). This research work is sacrificing immediate generalisability for depth of study.
2 To minimise bias or poor memory recall:
   - A number of views are collected on the same issues, from 8 academic staff and 7 staff outwith the programme under study, lessening the impact of bias or misinformation.
   - The interview questions are extensive and detailed, where some of the same issues are tackled in different themes (e.g. barriers to e-Learning), which presents an opportunity for staff to consider some topics in different contexts and acts as a check on the consistency of staff views.

- Documentation will be used as a means of understanding the university's e-Learning objectives and implementation issues, and also used to compare against interview answers.

3 Implementing a case study within one's place of employment has the comforting advantage of access to subjects but raises the issue of objectivity and switching hats between colleague to researcher. The researcher will adopt the following strategy to facilitate this research:
   - Participation in this research will be voluntary. Roles will be made clear to participants, i.e. that this is a research project carried out by a researcher (not a colleague) and that they are research subjects (not colleagues); the research process will also be explained to hammer home this point.
   - Interview questions will be structured and pre-prepared, providing a clear focus and minimising the opportunity for 'small talk'.
   - Interviews will be anonymised (Lecturer A, Lecturer B, Senior Member A, Senior Member B, etc.) to minimise the researcher placing an interpretation on participant answers based on personal knowledge. There will be a deliberate and significant time-gap created between the transcriptions and transcription analysis to further minimise the possibility of bias when interpreting staff views.
   - Furthermore, as far as is practical, staff transcriptions will be edited to remove identifying comments. This may help allay any concerns that staff may have concerning their transcriptions, with the added benefit that they may speak more freely.

4 As highlighted earlier, the use of themes (Drivers, Barriers, etc.) and a structured iterative approach to the data analysis, from describing basic data, to placing an interpretation on that description, to synthesising the results with the Literature Review findings, all provide a highly disciplined and structured approach to managing the qualitative data.

This research is not only valid, with potential issues addressed, it is also research that can be trusted. In terms of the reliability of case study research, Yin (2003, p. 38) states that the way to deal with reliability in a case study is to 'make as many steps as operational as possible and to conduct the research as if someone were looking over your shoulder'. To that end, the precise details of the case study, the data collection, and data analysis techniques applied to this empirical research are described in detail and available for scrutiny.

This empirical research will provide an in-depth study of a topical issue from the viewpoint of different stakeholders, from those at the chalk face to senior management. The insights gained from this study will prove of enormous relevance not only to the university in the case study but also to other universities seeking to advance their understanding of how to prepare academic staff for e-Learning, including drivers, barriers, and preparation models.

Appendix N: Research strategies

Action research

Action research starts with a particular problem that needs to be solved, or understood better, usually within the environment where the researcher is working. The key to understanding action research is to realise from the outset that the researcher is *involved* in the research not just as an observer but as a participant-researcher, i.e. the researcher is part of their own research.

For example, a teacher could carry out action research to improve an aspect of teaching. Perhaps pupils are having difficulty understanding a particular subject. The teacher would define the problem, plan a way to solve the problem (or to understand it better), implement the proposed solution, then evaluate the results.

To gain credibility in the research community and prevent accusations of personal bias, action research, although problem-based, nevertheless follows accepted research procedures: elucidates research objectives, reviews relevant literature, applies proposed solution, discusses findings, and comes to a conclusion.

The focus of action research is on promoting change, typically in educational and organisational settings, and central to this type of research is the idea of self-reflective enquiry. Action research is more than a process (define the problem, plan a solution, implement the proposed solution, evaluate the results), it is also a commitment to solving a problem. This is neatly summarised in Stringer's (2013) model of action research (Figure N1):

LOOK: Observe and record the context, the problem to be solved, together with participant roles and activities.

THINK: Think about the problem in more detail and identify a solution.

ACT: Put the solution into practice and evaluate the results.

Action research is an incremental activity. Very often the proposed solution is only partly effective or part of the answer, which means that action researchers require another iteration or two before they can bring their research to a satisfactory conclusion. You, as a dissertation student, do not have the luxury



Figure N1 Stringer's model of action research

of repeated attempts at solving a problem. In reality, you will have one go at action research: Look once, Think once, and Act once. That in itself should not deter you from action research. You are being tested on how to complete a dissertation, not that you must solve a particular problem. As long as you go through the process and make recommendations on what still needs to be done, if that is the case, or the implications of your work, or lessons learned, then you should be fine.

Further reading

Coghlan, D. (2019) *Doing action research in your own organization*. 5th edn. London: Sage.

Norton, L. (2018) *Action research in teaching and learning*. 2nd edn. Abingdon: Routledge.

Stringer, E. (2013) *Action research*. 4th edn. London: Sage.

Case study

A *case study* is a study of one example of a particular type of something, e.g. Oxford University is an example of a particular type of university, i.e. an ancient university; similarly, Ryanair is an example of a particular type of airline, a budget airline. The rationale for a case study is that it allows the opportunity to explore something in depth. The downside is that you cannot generalise your findings to a wider population, e.g. to all ancient universities or all budget airlines.

Case study research can be based on a single case study or multiple case studies (i.e. more than one case). If you decide to do more than one case study, then remember to apply the same research approach to each of your cases, otherwise it will be difficult to compare and contrast your case studies against one another. For example, suppose that you want to understand how universities in the same town treat incidences of plagiarism. Let us pick the city of Glasgow in Scotland as an example, where there are three universities: the University of Glasgow, the University of Strathclyde and Glasgow Caledonian University (incidentally, the case studies do not need to be in the same geographical vicinity).

These three universities would form your multiple case study research. Although you will collect some basic statistical data from each university – the number of students formally accused of plagiarism in the last three years, the number of students found guilty in those years, and the punishments meted out to those found guilty – you are particularly interested in the views of those students who have been accused of plagiarism, whether found guilty or not.

The primary justification for a case study is to explore some contemporary issue *in depth* – in this example, plagiarism – which is normally translated as engaging in meaningful interaction with the case study units. To collect data in a way that allows for detailed responses you decide to interview a selection of students from each of the universities. Whether to do one case study or to base your research on multiple case studies is a matter for you (after, of course, taking advice from your supervisor).

Dissertation students nearly always take the view that their research must involve a *comprehensive* study of some phenomenon. That is *not* the case. Case studies are tailor-made for many student dissertations and it is an option you should not dismiss out of hand. Within your time constraints, they allow you to set realistic objectives, study a topic in reasonable depth, and to emerge with ideas for future research.

A case study does not mean that you can pick a generic topic (e.g. budget airlines) and just study anything within that field: no, you still need to be focused (e.g. 'A Study of Customer Care in Budget Airlines: A Case Study').

Further reading

Ellet, W. (2018) *The case study handbook: a student's guide*. Boston: Harvard Business Review Press.

Yin, R. K. (2018) *Case study research and applications: design and methods*. 6th edn. London: Sage.

Ethnographic research

Ethnography has its roots in anthropology, the study of people in their natural environment. In effect, it refers to the study of *cultures*. For example, the study of Amazon tribes would qualify as ethnographic research. Ethnographic researchers patiently record what they observe and then attempt to interpret that data. Theirs is a difficult job, not just in terms of the patience that is required, but also with respect to the difficult conditions under which they work. The traditional ethnographic researcher has to be admired. These days, however, ethnography has taken a wider meaning, referring to the study of any culture, old or modern. A modern example of ethnography would be the study of gang culture.

Field notes – a record of your daily observations – are at the heart of ethnographic research. Every time that you go out to meet/observe/interact with your research subjects, you should have already decided on how you will record the day's events. Do not rely on memory. You need to create notes about what you are witnessing. These notes will form the basis of your evidence and analysis. What sort of information should you record? Date, time and place are essential. It is also helpful to note the purpose of a particular field trip (e.g. Purpose: to observe a day in the life of Tom, a beggar). You need to describe events and jot down initial thoughts/views/feelings that spring to mind. A standard layout that you can use is shown in Figure N2.

Nowadays it is much easier to record information. You can use digital technology to record notes, capture audio, and to video evidence, including your own running commentary. Or you can borrow or purchase a small digital voice recorder. The advantage of a digital voice recorder is that your research subjects are more likely to view that as less intrusive than someone taking pictures or video evidence. Ethnographic research is not something that the novice student ought to attempt without clear guidance from an experienced supervisor.



Figure N2 Ethnographic field note form

Further reading

Hammersley, M. (2019) *Ethnography: principles in practice*. 4th edn. Abingdon: Routledge:

Experimental research

Experimental research tends to be the domain of the scientist, where an hypothesis (i.e. a theory) is tested through some type of experiment. The scientist will define the problem, formulate an hypothesis, then implement an experiment to test whether or not the hypothesis was correct. The experimental researcher is normally well versed in using statistical tools and techniques.

An hypothesis is a theory proposed by a researcher. It may be a theory that the researcher has come up with or it may be someone else's theory. An hypothesis has to be explicitly and unambiguously stated, such as:

Hypothesis: It rains more in England than in Scotland.

This is called the prevailing theory. Scientists refer to a theory put forward by a researcher as H_0, also called the null hypothesis. Example:

H_0: It rains more in England than in Scotland.

The alternative theory is called H_1. Why is it called the *alternative* hypothesis? This is because the suggested theory is alternative to the opposite theory, which prevails until there is evidence refuting it:

H_1: It does not rain more in England than in Scotland.

The two theories, or hypotheses, are competing against each other. After the researcher carries out an experiment, only one theory will survive. However, it is *always* the null hypothesis, H_0, that is tested. That is the theory that has priority and until evidence is produced to nullify or reject it, then it remains the prevailing theory.

Here are two more examples of alternative (H_1) and null (H_0) hypotheses. The null hypothesis, H_0, is the one that the researcher is interested in refuting, to be replaced by a new theory, the alternative theory, H_1:

Example 1

H_1: There is no difference in taste between Coke and Diet Coke.

H_0: There is a difference in taste between Coke and Diet Coke.

Example 2

H_1: There is a difference in levels of intelligence between children raised in working-class environments and those raised in middle-class environments.

H_0: There is no difference in levels of intelligence between children raised in working-class environments and those raised in middle-class environments.

The scientific protocol used to conduct experimental research can more formally be expressed by the seven-stage process shown in Table N1.

Table N1 Experimental research protocol

Stage	Activity
1	State alternative hypothesis, H_1, and null hypothesis, H_0
2	Determine sample groups
3	Specify control and test groups
4	Establish sampling procedure
5	Perform experiment
6	Analyse raw data
7	Accept or reject null hypothesis, H_0

1 It is in the first stage where you write down your theory, H_1, and the theory that you are testing, H_0.
2 The second stage is where you identify your sample population. The size of your sample population should be large enough to allow you to make statistically significant generalisations. Be careful how you choose your sample population: if you are interested in those who vote and you select just students for your experiments, then, at the most, you will only be able to generalise about students who vote, not all voters. Also, experiments are more reliable where the research subjects are selected at random (minimises bias).
3 In the third stage you create control and test groups. Once again, these should be selected at random and, where possible, performed 'blind' or 'double-blind'. The test is blind when the participants are unaware of which group they are in; the test is double-blind when neither the participants nor the researcher are aware of which group has received the causal agent. Both the control and test groups are identical with the exception that the variable considered by the researcher to make a difference – *the causal agent* – is introduced into the test group.
4 Next you establish how often you will sample your test subjects: every minute, every hour, every day, every month? The sample period depends on the type of experiment.
5 Now you perform your experiment, adhering to your stated procedures.
6 After which you analyse your data using appropriate statistical techniques.
7 Lastly, you decide whether to accept or reject the prevailing view, the null hypothesis, H_0. If your results support the rejection of the null hypothesis, then your alternative theory, H_1, is accepted and, in turn, becomes someone else's null hypothesis.

The purpose of experimental research is to continuously replace one null hypothesis – the prevailing theory – with a better one.

Further reading

Coleman, R. (2018) *Designing experiments for the social sciences: how to plan, create, and execute research using experiments*. London: Sage.
Lazic, S. E. (2016) *Experimental design for laboratory biologists*. Cambridge: Cambridge University Press.

Grounded theory

Grounded theory is quite a difficult theory to apply in practice, and only a very confident student ought to attempt grounded theory. It is demanding in the sense that it does not follow the normal procedures for implementing a research project: that is, start with a clearly defined research focus, find out through a Literature Review what others have to say about your research

problem, implement your own practical research, discuss the findings, come to a conclusion, etc. Instead, grounded theory is higgledy-piggledy in that you do not start with a clearly defined set of research objectives but follow where your research takes you, building up theory as you go along.

In grounded theory, you start with a rough idea of the area that you are interested in researching; next, you carry out some empirical research; then you refer to some literature that you think is relevant to the work that you carried out; you then, depending on what you have read, implement further practical work; and so on, jumping back and forth between your empirical work and your review of relevant literature, until you develop a sustainable theory grounded in your practical research, but influenced by reference to appropriate literature.

It is clear that the relationship between the Literature Review and your practical research is not sequential but symbiotic, where one feeds off the other. It is very exploratory in nature, and so means that you need to be aware of when to call a halt to your research, otherwise it will be never-ending. It is very much like the relationship between an artist and a painting: what the artist thinks will influence what the artist paints; and what is painted will influence what the artist thinks; but at some point the artist needs to set aside the paintbrush or risk ruining a work of art.

Further reading

Bryant, A. and Charmaz, K. (2019) *The SAGE handbook of current developments in grounded theory*. London: Sage.

Historical research

Historical research, as the name suggests, is research that focuses primarily on events that occurred in the distant past (e.g. the conditions under which soldiers lived during the First World War), but it can also deal with events in the recent past (e.g. the growth of the Internet). Historical research is a bit like ethnographic research in the sense that the researcher requires skills in observation and interpretation, except in the case of historical research the subjects under study tend to appear in documents, videos, etc., rather than in real life. You could say that historical research is akin to a detective mystery, but where all the suspects are (normally) dead! When the historical researchers investigate events in the recent past, the issue arises of whether they are engaging in historical research or contemporary research.

The immediate difficulty encountered by those seeking to find out about the past is that the past no longer exists. All they have to go on are fragments which they have to piece together to form a coherent narrative. Their task is therefore twofold: to find the right fragments and to tell a credible story. Historical researchers call such fragments 'documents', which can include a whole range of primary and secondary sources: manuscripts, books, maps, voice recordings, photographs, films, government documents, etc.

In the context of historical research, a primary source is a 'document' from the period under study; a secondary source is one referring to the same period but created by someone else at a later date. Examples of primary sources include written statements, archive film, newspapers and diaries. Examples of secondary sources include documentaries, research papers, books and reports. Primary and secondary sources can be found in libraries, government archives, historical associations and on the Internet.

Good historical research requires that you should be versed in core scholarship skills such as oral history (e.g. in collecting oral testimonies), information skills (finding sources, organising documents/data, Internet skills, etc.), appraising the worth of primary and secondary sources (placing it in context and being aware of potential bias), textual analysis, understanding historical explanatory paradigms such as Marxism and psychoanalysis, and having the ability to piece all this together to form a compelling narrative.

Notwithstanding the difficulties inherent in historical research, of all the research strategies it is the one that is actually fun to do.

Further reading

Brundage, A. (2018) *Going to the sources: a guide to historical research and writing*. 6th edn. Hoboken, NJ: Wiley Blackwell.

Mixed methods

Mixed methods are just that – a mix of different research strategies. For example, you may decide to implement a case study of one type of organisation and then survey staff within that organisation. You also may decide to mix your data collection techniques, e.g. implement an initial online survey followed by selective interviews.

Further reading

Bazeley, P. (2017) *Integrating analyses in mixed methods research*. London: Sage.
Creswell, J. W. and Clark, V. L. P. (2017) *Designing and conducting mixed methods research*. 3rd edn. London: Sage.

Survey

A *survey* is a representative sample from a larger population about some phenomenon, e.g. how people would vote in an election. There are a number of ways that you can carry out a survey, examples of which include: personal interviews, telephone interviews, postal questionnaires, email questionnaires, online questionnaires using online survey software, and even group questionnaires (where you get a target population together to complete your questionnaire, e.g. a group of classmates – convenient, saves time and ensures a high return rate).

Personal *interviews* are resource-intensive, for interviewer and interviewee, but the advantage is that responses to questions are usually more expansive than

those obtained through other means. Surveys can be time-consuming and so rather than interview the sampled population, students often favour questionnaires. The main questions you need to consider when designing your survey are:

- Which group of people do I wish to survey? Your target population should be an easy one to determine (business leaders, iPad users, students in debt, computer hackers, and so on).
- How many people do I need to survey? This depends on a number of variables, including the size of the main population from which your survey population is derived, geographical considerations, the type of survey you want to use, ease of access to your target population, and expected return rate. If in doubt, seek your supervisor's counsel and have a look at past dissertations where students made use of surveys.
- Are the intended recipients easy to access? What you need to remember is that you have a dissertation to complete and by the time that you start your empirical research your submission date will be drawing ever closer, so be realistic when making decisions about your target group.
- What should I ask them? Your questions should link directly to your research objectives. In other words, pose questions that help to answer your research objectives/questions. Make life easy for your research subjects by grouping your questions into themes that reflect your research objectives (e.g. Drivers to e-Learning, Barriers to e-Learning, etc.). Let them know what these themes are by either telling them during your personal interview or by providing appropriate headings in your questionnaire.
- How should I ask them? There are two strands to this question: which techniques should I use (personal interview, email questionnaire, etc.) and how should I construct my questions? If you can obtain personal interviews and you have the time, then by all means do so. Or, if an email to your research subjects is easier to do, without compromising the quality of your work, then send out a questionnaire as an email attachment (or link to an online survey). If geographical location is an issue but you still want to do a personal interview, then you can carry out a telephone interview or even use digital technology to hold a video interview online.
- The format of your questions will depend on the kind of research you are doing: is it chiefly qualitative or quantitative in nature? Qualitative research dictates an emphasis on open questions whereas quantitative research leans more towards closed questions. So the type of questions that you ask – open or closed – depends on whether or not you want qualitative or quantitative data, or both.

In any event, try and avoid getting carried away with the number of questions you want to ask. It is not always the case of the more the merrier – too many questions might deter people from completing your questionnaire or giving you an interview.

Further reading

Nardi, P. M. (2018) *Doing survey research*. 4th edn. Abingdon: Routledge.

Appendix 0: Sampling techniques

- *Random sampling* is when you sample a population entirely at random. Example: if you want to know how people will vote in a local election, rather than ask everyone in that town – because it may be too costly and perhaps impossible to accomplish in a set period – you might decide to stop and ask a selection of people at random in the street. Be careful, though, that the samples you gather do not fall victim to the accusation of bias: the street you stood in, the time of day you carried out your survey, the number of people you asked, the type of people you asked, and so on. Nonetheless, implementing a random sample helps you to reduce bias.
- *Simple random sampling* is a variation of random sampling. In random sampling it does not need to be the case that each member of your population has the same chance of being selected (e.g. if you pick a Saturday afternoon to sample your population, then football fans, many of whom may be watching their favourite football team at the time of your sampling activity, have less of a chance of being sampled), whereas with simple random sampling every member of your population ought to have an equal chance of being selected. If you have a large population where it is impossible to identify every member – so as to allow everyone an equal chance of being selected – then your sample may be subject to significant bias.
- *Stratified sampling* is when you divide your target population into identifiable groups (strata) and then take samples from each of these groups. For example, students attending a lecture could be classified under the strata 'male' and 'female' or 'school leaver' and 'mature entrant', and samples taken from each stratum.
- *Cluster sampling* is when you break down your target population into clusters (or groups or strata) but, unlike stratified sampling (where you immediately select samples from each of your groups), you then randomly select a sample of your clusters. From within each of your chosen clusters, you will then select random samples. It is actually quite simple to understand, as the following example shows. Suppose that you want to investigate the health of chickens in Scotland. It would be time-consuming and expensive to check on the health of every chicken, so you decide to use the different regions of Scotland as your clusters (Strathclyde, Highland, Grampian, South Lanarkshire, etc.), from which you then randomly select a subset of these regions, thus reducing the clusters that you need to target. From these clusters you randomly select the chicken plots that you will visit for inspection. You have to be careful that your clusters are of comparable size, so it may be appropriate to merge some of your clusters at the very start of your research before you randomly select the clusters that you will then explore in detail.

- *Systematic sampling* occurs when you take a sample of your target population at equal or regular intervals. For example, you select every fifth name on a list or every tenth customer record from a customer computer database.
- *Quota sampling* does not involve random sampling and is therefore vulnerable to the criticism that there is no way of telling if the results are representative of a larger population. Sampling that does not involve random sampling is sometimes referred to as non-probability sampling. In quota sampling, you decide beforehand the type and number of members (i.e. your selection quota) that you intend sampling. When you are stopped in the street and asked about your choice of breakfast cereal or how you will vote in the next election, then it is likely that you are the target of quota sampling (you have been picked because you are one of the '5 elderly males' or '10 teenage females' or '15 professionals' that are on their list for selection).
- *Convenience sampling* is another non-probability approach to sampling, i.e. it is non-random. It is implemented because, as the name suggests, it is convenient to the researcher. You might decide to interview fellow students for your dissertation because it is convenient for you to do so; similarly, you might interview staff in an organisation where you have worked and have ready access. That is not to say that your research findings will not prove valuable, although they must be treated with caution (if your sample has not been selected randomly, then it is difficult to claim that it is representative). Convenience sampling tends to be used as a form of exploratory research, giving ideas and insight that may lead to other, more detailed and representative research. If you are interested in exploratory research, and not claiming that your findings will be representative of a larger population, then convenience research is perfectly acceptable for a student dissertation.

Appendix P: Limitations/issues

Table P1 Research strategies: limitations/issues and strengths

Strategies	Limitations/issues	Strengths
Action research	– Small-scale – Difficult to set up	– Results based on practice – Improves how people work
Case study	– Can't generalise the findings – Not easy for others to repeat	– In-depth study – Insights gained for future research
Ethnography	– Takes a long time to do – Getting research subjects to behave naturally	– Rich source of data – Reveals how people interact in everyday settings
Experimental research	– Artificial setting – Human behaviour/error – Biased interpretations	– Control over variables – Establishing cause and effect – Repeatable
Grounded theory	– Not easy to conduct – Not easy to present the findings	– Interaction of theory/practice to exploit how people think/behave – Rich narrative produced
Historical research	– Access and control over sources – Objectivity of sources – Fragmented evidence	– Opportunity to recreate events – Opportunity for fresh interpretations
Mixed methods	– Skills required in different methods – Integrating the different methods	– More tools to use – Flexibility
Survey	– Honesty of responses, particularly with closed questions – Oversimplification of results	– Easy to construct – Access to large numbers – Opportunity to generalise findings
Practice-based research (in art)	– Relative newcomer to research – Inconsistent labels – Switching from practitioner to researcher – Can't generalise	– Results based on practice – Depth and insight – Personal stories – Other artists can relate to the findings

Table P2 Data collection methods: limitations/issues and strengths

Data collection methods	Limitations/issues	Strengths
Interviews	– Management issues (access to subjects, time to complete) – Time to interpret	– Personal stories/ insights from key stakeholders – Opportunity for meaningful discussion
Questionnaires	– Poor completion rates (if questions too many or too difficult) – Can lack depth – Reliability of responses	– Useful for large-scale, single-issue research – Easy to code
Observation	– Only a snapshot – Time needed to observe – Subjects can behave 'correctly' when observed	– Seeing things as they are for yourself – Can reveal new insights
Documentation	– Getting access to sensitive material – Documents not created with researchers in mind (need careful analysis) – Only partial picture (can't interview a document!)	– Historical record – Documents not influenced by researcher (i.e. static evidence) – Valuable corroborating evidence – Inexpensive
Experiment	– Artificial setting – Human behaviour/ error – Biased interpretations	– Control over variables – Establishing cause and effect – Repeatable
Focus groups	– Getting everyone in the same place at the same time – Controlling flow of discussion	– Saves time – Multiple opinions – Reactions immediate and obvious
Reflection-**in**-action log (for artist)	– Determining a methodical approach – Switching from practitioner to researcher	– Thoughts and feelings revealed as events unfold – Insight into practice
Reflection-**on**-action log (for artist)	– Difficulty in criticising one's own work	– Artist's views on created artefact

Appendix Q: The Viva

The following contains advice on how to prepare before the viva and how to behave during the viva.

Before the viva

- Summarise your work into manageable chunks. Take each of your dissertation chapters – from your Introduction right through to your Conclusion – and summarise them in a bullet-point list, using one A4 sheet of paper for each chapter. This will make it easier for you to revise. An alternative, or additional, approach to summarising your dissertation is to do so diagrammatically using mind-maps.
- Write down the main players in your research area, their publications you cite, and the part each plays in your research (make use of one or two particularly memorable quotations). You will look incompetent if you are unable to talk about authors whom you have cited in your dissertation.
- Anticipate questions and prepare your answers. Do not panic, because most of the questions will be straightforward. It is generally not difficult to anticipate the type of questions you will be asked, although there will always be one or two from 'left field'. The questions tend to follow the structure of your dissertation, so take a blank sheet of paper for each chapter of your dissertation and reflect on questions that could be asked. Examples of typical questions that crop up again and again are:
  - In one sentence, what is your work about?
  - What led you to do this research?
  - Why is this work worth reading?
  - Can you explain your research objectives to us?
  - You say so-and-so has such-and-such a view. Are you sure about that?
  - Who would you say are the main players in your field?
  - I don't agree with your interpretation of so-and-so's model . . .
  - Your references are pretty old. Why haven't you used more up-to-date sources?
  - Are you really saying that your approach to empirical research is the only way to do research? No other way counts?
  - Explain your procedure for ensuring that your survey was random.
  - You cannot claim that your case study is representative, can you?
  - Why should we rely on your research?
  - You know the people you interviewed, so surely your work is biased?
  - You created the art work. Surely your views on what you did are therefore open to the accusation of bias?
  - Can you explain to us how you analysed your empirical data?

  - Do you think you achieved your research objectives?
  - I'm not sure that your conclusions follow from your empirical work . . .
  - What would you say are the practical implications of your research?
  - Can you elaborate on your recommendations, particularly on how you see them being implemented?
  - What's good about your work?
  - If you had to do this research work again, what would you do differently?
  - Why do you think this work deserves a pass?
  - So, what would you say is your contribution to knowledge?
- Ask your department for a mock viva or get your fellow students to do one. It is a worthwhile exercise – the atmosphere is non-threatening and the questions and debates that take place can throw up issues you had not previously considered.
- Find out who your examiners will be. If they are external examiners, look them up on the Internet to see what their research interests are, and get hold of their recent publications. That way you will get an idea of their views about your research area (they are your examiners because they have expertise in your field of research). For example, if your research is in e-Learning and you have argued in your dissertation that there are many barriers to e-Learning but one of your examiners, in a recent publication, takes a different stance, then you will at least be forewarned and better able to prepare a response to a possible difference of opinion.

During the viva

- When your examiners introduce themselves, write down the names of the examiners you don't know. Introduce yourself and your dissertation topic.
- When an examiner is asking a question do not interrupt. Politely and patiently wait for the question to be concluded. In fact, as the question is being formed, write it down (or summarise the gist of it). That gives you time to think about what you are being asked and shows the examiners that you are treating their questions seriously.
- Take your time answering a question. Once you have written down the question, think about what you are being asked. How many points? What part of the dissertation does each point relate to? Formulate an answer in your head. Take a long, deep breath, then begin your answer with reference to the relevant part of your dissertation. In a viva, patience is a virtue. Interrupting examiners and rushing answers will do you no favours.
- If there is a question that you do not understand, then say so. Ask your examiner to rephrase any question, or to elaborate, where you are unsure of the question's meaning. It takes confidence to do this, but do not ask an examiner to re-phrase every question! If there is a question that you find difficult to answer, then graciously admit 'That's a good question!' Your comment will ease the tension, and if you are lucky, the examiner might offer you some clues as to how to answer it!

- On the other hand, if there is a question that you are unable to answer or you are in a situation where you are having difficulty persuading the examiner on some moot point, then accept a difference of opinion – even defeat if the issue in question is not central to your work – and move on. If you believe the examiner to be right, then you can say so but think carefully before you concede. You are there to defend your work, and examiners are testing that you can do that. So, defend, defend, defend! If you concede points too readily, you may be vulnerable to the accusation that although your work was well written and persuasive, your oral defence was feeble. Concede where you genuinely agree with the examiner. Put up a robust defence of your work, but if things are getting hostile, and you do not want to give in, then agree to disagree.
- The examiners' questions might not always follow a linear path, i.e. starting with questions on the Introduction, then the Literature Review/Contextual Review, followed by Research Methods, and so on. If they have specific issues they want to explore, then it is to these issues they will direct their questions, probably in order of importance. For instance, if they decided among themselves beforehand that they had problems understanding aspects of your concluding chapter, then that is where their first set of questions are likely to be directed. So be prepared for different 'angles of attack'.
- Remember, the examiners are not your enemy; nor you theirs. They want you to pass, and will be the first to congratulate you, but only if your work is of an acceptable standard. They are asking you probing questions, not because they do not rate your work, but because it is their job as guardians of academic standards to be convinced that: (1) it is your work; (2) you can defend your work; and (3) you are a competent researcher when judged against university and national standards.

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