POCKET STUDY SKILLS

Michelle Reid

REPORT WRITING

SECOND EDITION

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POCKET STUDY SKILLS

Series Editor: ***Kate Williams****, Oxford Brookes University, UK*
Illustrations by Sallie Godwin

For the time-pushed student, the *Pocket Study Skills* pack a lot of advice into a little book. Each guide focuses on a single crucial aspect of study giving you step-by-step guidance, handy tips and clear advice on how to approach the important areas which will continually be at the core of your studies.

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Introduction

Business reports … lab reports … research reports … there are many different kinds of reports you might have to write as part of your university course. This is because the report format is a useful and widely accepted way of structuring information.

Knowing how to structure a report and where to put the different kinds of information can cause concerns such as:

- Which section should this go in?
- How do I lay out my report?
- What goes in the discussion?
- What headings does a business report have?

This book answers these questions by showing you how a report structure can be a communication tool rather than an imprisoning set of rules. If you consider the purpose of your report and the needs of your readers, you can be confident that your structure will fulfil these needs, and that each section of your report will do the correct job.

This book demonstrates the purpose and the readership of reports, how to find the information your readers need, the role that each section plays in communicating this

information, how to present your information visually … and how to communicate all this concisely!

This new edition has been extensively revised to reflect wider student concerns surrounding reports as university assignments, and includes sections on reports as part of group work and literature reviews within longer reports and dissertations. It also gives additional examples of how to write concisely. As the need for critical thinking is often highlighted in feedback but is not often explained, there is a new chapter on where and how to incorporate critical thinking into reports.

Most professions (and many university subjects) have their own kinds of reports, so knowing how to write these well is valuable both at university and beyond.

1 The purpose of reports

Reports are formally structured and communicate the findings of investigations in a clear, logical way.

Your investigation may be a scientific experiment, a site visit, a series of observations, research into a process or procedure … but whatever different types of investigation you do as part of your course, you will need to *report*:

- what you did
- how you did it
- what you found out
- why your findings are important.

The content and structure of your report are determined by the needs of your **audience** and the **purpose** of your report … but how do you know who your audience are and what they want?

Read the brief!

Reports normally have a brief, or a set of instructions, telling you the requirements of your investigation.

In a work situation the brief may be set by your clients or your manager, and they will expect you to follow it! At university your brief is most likely to be set by your tutors … and they also will expect you to follow it!

You will get the crucial information you need from reading your brief carefully:

The main purpose is a feasibility study.

Investigate the feasibility of using wind power to generate some of the electricity for the new halls of residence on the Central Campus.

Identify different ways of using wind power to generate electricity. Develop a set of criteria for evaluating these methods of power generation for a hall of residence. Make recommendations on the feasibility of using wind power at the new hall for the Campus Facilities Manager to take to the next Planning and Policy Board meeting.

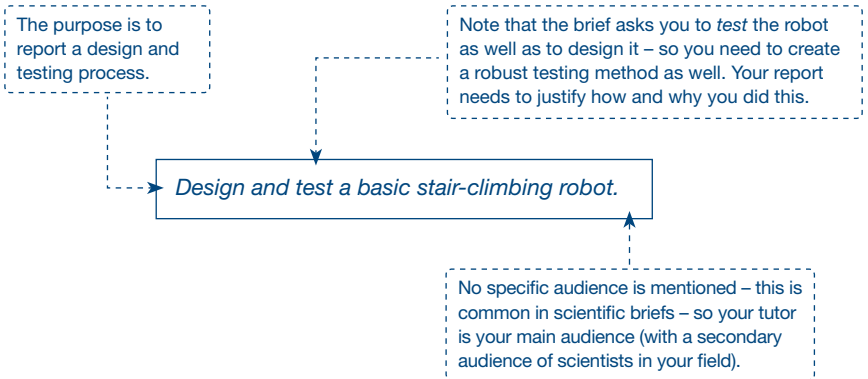
Identify … Develop … Make recommendations – these are the things your audience want included in the report.

Note that you are asked to define criteria for evaluating the methods of wind power generation yourself, so you need to define how you are judging 'feasibility' – what would your audience consider the most important factors in making wind power 'feasible'?

– cost-effectiveness?
– efficiency?
– reliability?

Your main audience is the Campus Facilities Manager, but you also have a secondary audience, the Planning and Policy Board – so the recommendations you make need to be suitable for the Manager to take to the Board meeting.

Even a short brief contains a lot of information about what you are expected to do.



Your brief tells you about the investigation you are carrying out, but you also need to know other essential requirements of your assignment, such as:

- word count
- format
- referencing style
- deadline for handing in.

In addition to this, **read your assessment criteria** – these will give you valuable information about what you need to demonstrate in your report and the 'learning outcomes' you are expected to fulfil.

Who are the audience?

A report is a piece of *informative* writing, which means that it has an intended audience who will want to find things out from reading your report.

Your brief or assignment description should tell you who your intended audience are, and this will have an important influence on the content of your report: you need to tailor the information to suit the needs of your audience.

Reports about the same subject written for different audiences might each have a very different content and tone.

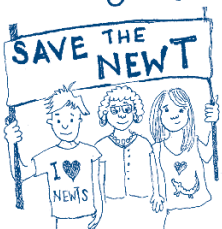
> *Write a report on a speech and language diagnostic assessment for a child with mild phonological difficulties.*

How might the report differ if you were writing it for …

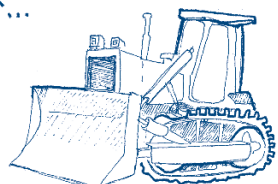
- the parents of the child
- the child's school
- the director of the speech and language clinic
- the child's doctor who referred the child to the clinic

Write a report on the habitat and population of rare great crested newts on the site of a disused factory.

How might your report differ if you were writing it for...



A national conservation charity...



A development company wanting to build a new supermarket...

The town council wanting to improve employment...

Lawyers acting for the factory owners ...

A local shop owners' group...

Audiences have vested interests in the information being reported and motivations for wanting the investigation conducted. As a report writer, you need to take these needs into consideration.

This is why, even though your brief is set by your tutor, they may ask you to write for an imaginary client or a professional situation. In these circumstances, you need to consider *who* would use the information that you are reporting and *how* they would use it – for example, would your recommendations be passed on to a secondary audience or used to advise clients or managers? What would be relevant and useful for these audiences?

If your main audience is your tutor, they still want to know that you can report the findings of your investigation in a logical and relevant way, relating them to the overall purpose of the investigation.

What is the purpose?

As a report is a piece of informative writing, it not only has an audience who want to be informed, it also has a *purpose* – there is a reason for wanting the information.

- *What* do your readers want to find out from your report?
- *How* will they be reading your report?
- *Why* will they be reading what you are reporting?

Often, the information in reports will be *acted upon* by your readers in some way. The information in different reports may have the purpose of advising, persuading or recommending the readers to do something. For example:

You are asked to analyse whether regular exercise helps people manage their depression, and to present the report to an audience of counsellors and doctors.

↓

The purpose of the report is to inform the audience about whether this potential aid in the management of depression is supported by sufficient evidence.

↓

The counsellors and doctors will want to know whether they should be recommending more regular exercise to their clients and patients based on your analysis of the evidence.

↓

So your report needs to give clear guidance on whether the evidence suggests that there are benefits to people with depression, and to what extent counsellors and doctors should act on this information.

↓

Part of persuading an audience is being able to anticipate any scepticism they may have about the evidence you present. For example, the doctors and counsellors might raise the objection '*How* do we encourage our depressed patients to start exercising?' You need to take this into account – even a brief acknowledgement of their concerns may make them more receptive to your message.

You may be thinking that the concept of 'purpose' doesn't apply in the same way to reports on scientific experiments, but the principles of *audience* and *purpose* do still apply. As a scientist, your audience is your tutor (and fellow scientists in your field) and your purpose may be to test your hypotheses. Based on the analysis of your findings, you may make recommendations for further research to fill gaps in your findings or to make your findings more robust.

If your brief asks you to make recommendations based on the information in your report, it is important that you make these clearly, and that they don't get lost in the body of your conclusion. Recommendations serve a different purpose to a conclusion: a conclusion summarises *why your findings are important*, whereas recommendations say *what actions your readers should take* in response to your findings.

What do your audience know already?

Not only do you need to consider the needs of your audience and what they want to find out from your report, you also need to take into account their background – what information do they already have? You don't want to repeat unnecessary information since a report has to be as concise and as relevant to your readers as possible (and you also have a word count to stick to!).

In a work situation, including information that your readers already know will undermine your authority and make your readers less receptive to your message. On your university course, your tutors will want to see that you can be selective and make judgements about what is relevant. Your marking criteria will probably contain something about the 'relevance' or 'suitability' of the information included in your report.

A main problem with my students' surveying reports is they spend too long describing the client's house – but the client already knows what colour their own door is ... get to the interesting information more quickly.

(Real Estate and Planning lecturer)

The introduction to a lab report shouldn't be a long historical summary of all the experiments done in the field. The methods and findings of most older experiments have now been surpassed.

(Food Science and Nutrition lecturer)

Demonstrating an understanding of the client's problem is important. It shows the students know what they are talking about, but I always ask: What is new about this? What insights are you giving me? How does your interpretation of my problem give me confidence that you're going to provide me with solutions?

(International Marketing lecturer)

How are reports read?

A report is an act of communication, so it is helpful to understand *how* your audience will read your report.

When marking your reports, your tutors are likely to read them all the way through from beginning to end, as they need to see how you have fulfilled the marking criteria.

However, reports are not normally read in such a linear way. Readers are likely to go straight to the sections that they think will give them the information they need and then, based on these, make decisions about whether to read the rest of the report.

Reports are about finding relevant information easily. Each section of a report does a specific job (as shown in Chapter 3), so the structure of the report signals to readers where they can find the information they want easily and quickly.

Research into how managers read reports (cited by University of Reading 2017b) showed that they were most likely to read the following sections, in this order:

1 abstract or summary
2 introduction
3 conclusions
4 findings
5 appendices.

The way that managers read reports shows that the smaller sections of a report, like the abstract and conclusions, have an important role to play in helping your audience get the information they need. It is worth spending time making sure that these sections are accurate because they act as your 'shop window', showing what your report contains and why your readers should care about this.

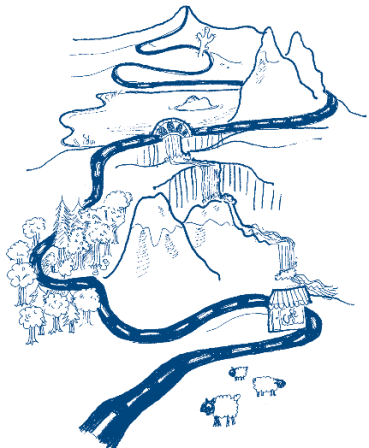
How are reports written?

Just as reports are not *read* in order from beginning to end, it is also likely that you are not going to *write* your report in a linear way.

This is because a report is an account of an investigation that you have conducted … and investigations rarely happen in a linear, well-ordered manner!

Any investigation or piece of research is an iterative process: you start out in a certain direction (for example, by making a plan, doing background reading or carrying out a pilot study) and then, as a result of your initial findings, you may go back and change your original ideas, refining and developing them. An investigative journey often involves detours and loops before you fully work out where you want to go.

A report is an account of this investigative journey, but it imposes an artificial logic on it. Although you may have gone down diversions or looped back in your investigation, your report will lead your readers through it clearly, in an accepted formal order. Although each investigation is different and takes a different path, the structure of a report gives a familiar order to the information – we know what to expect, what we are going to find in each section and what job that section does.



your investigation journey

your report

Some sections of a report, like the **abstract** and the **introduction**, give important context and summaries of the investigation, so can only really be written (or redrafted) at the end, when you have a clear idea of what you did and where you ended up.

Other sections of a report, like the **results** and the **discussion**, are dependent on you finding out information or doing practical work, so you need to do this before you can write them up.

However, the **methods**, or descriptions of what you did, are something that you will probably have to work out in advance (you need to know roughly what you are going to do before you can do it). This section is also more descriptive and straightforward to write, so it is likely to be the one that you can write first.

Differences between reports and essays

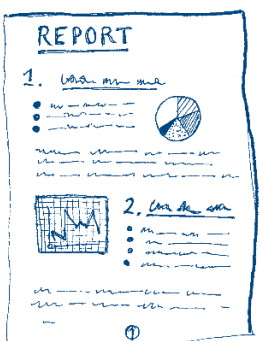
A report is a piece of informative writing with a specific audience and purpose; it is a distinct 'genre' or type of writing, and so it has a different style, and different features and conventions to other forms of writing that you might do as part of your course.

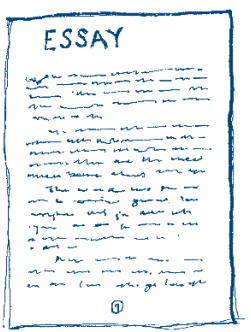
It is easier to see how a report is a distinct genre of writing if we compare it with another common genre of academic writing – the essay.

Report	Essay
Purpose	
An account of an investigation.	An answer to a question.
Needs to focus on the brief or on the specific investigation set.	Often has a broader scope – needs to interpret and define the question.
Reports what you have done and what you found out.	Discusses an issue or a point of academic contention.
Makes recommendations supported by appropriate (referenced) evidence.	Makes a coherent argument supported by appropriate (referenced) evidence.
Audience	
Written for a specific audience established in the brief (a client, a manager, etc.), but your tutor is also your audience.	Not usually written for a specific audience (apart from your tutor).
Format	
Formally structured, with headings, sub-headings and bullet points.	Continuous prose in paragraphs, but usually with no headings or bullet points.
May contain diagrams, tables and figures.	Does not usually contain diagrams, tables or figures.
Style	
Written in an appropriate style for each section (e.g. descriptive style for methods, analytical style for discussion).	Written in a single, discursive style throughout.

Text adapted from University of Reading (2017b).

These differences between reports and essays are generalised – some tutors have different preferences, for example encouraging the use of sub-headings in essays to break up the text. Always check with your individual assignment criteria first, and, if in doubt, ask.





You can get an idea of the different scope and intention of essays and reports by comparing the following report briefs and essay questions:

Report briefs	Essay questions
Based on your recent placement, compile a case report for a client, providing evidence for how you have taken issues of social injustice into account in your client's care plan.	*The most important role of a social worker is to combat social injustice – discuss.*
Investigate the conservation measures needed to ensure the correct preservation of human remains at the new dig site at Silbury Hill.	*What challenges are posed by the study of human remains for the reconstruction of past social organisation?*

If you are not sure whether your assignment should be written as a report, an essay or in another format, check your assignment guidelines and, if you are still not sure, ask your tutor – selecting the wrong type of assignment format will definitely lose marks.

Types of reports

As reports are a useful and well-organised way of presenting information, they are found in many different professions and academic disciplines, ranging from the sciences, business and management, to health and social care.

Compare the basic outline structures of a science lab report and a business report:

Science lab report
- Abstract
- Introduction
- Methods and materials
- Results
- Discussion
- Conclusions
- References

Business report
- Title page
- Executive summary
- Table of contents
- Introduction
- Discussion
- Conclusions
- Recommendations
- References
- Appendices

In the first year of my Animal Science course we had to write field reports, lab reports and business reports!

(2nd-year Animal Science student)

There is a similar logic and progression to both reports, even though some of the individual sections are different or have different names. This is because they have to serve the different needs and purposes of their readers – for example, this business report doesn't have a 'Methods' section: the readers want to know what was found out and what to do about it, but they are less interested in *how* the investigation was conducted. In contrast, the lab report has a 'Methods and materials' section because an important aspect of any scientific investigation is its rigour and reproducibility.

With all these different types of report, how can you know what you are supposed to do and which type of report is required?

Always start from the brief or instructions you are given. If your tutors want you to follow specific conventions for your reports, they should let you know – so check your course handbook (paper or online) or ask.

What if your report has an unfamiliar structure?

Something that can cause confusion is when tutors set an assignment that is called a 'report' but that doesn't appear to follow any of the conventions of reports that you're normally used to following. It's not a lab report, a business report or a fieldwork report … so what does your tutor want? It's natural to feel slightly anxious, especially if you have previously been told in other modules on your course that reports must follow set rules and a set structure. However, some tutors may simply use the term 'report' to mean 'not an essay'.

The assignment below was set for a group of Agriculture, Policy and Development students:

> *Write a critical report on the literature about public–private healthcare partnerships in developing countries that you've read for this module.*

The students were used to writing either business case reports or fieldwork reports, both of which had clear sets of headings and structures, and the students would get marked down for not adhering to the norms. For this assignment, therefore, they were worried that there was also a set structure, which they had somehow missed. They were concerned about getting it wrong, so they talked to their tutor. She explained that when she said 'report' she meant that they could use headings to group the literature into themes in order to compare it. She didn't expect a set structure, but she wanted the students to decide on their own themes and to turn these into headings for their reports.

If you get a report assignment that seems unfamiliar, you can follow these principles:

- Look at your assignment brief and marking criteria carefully for any information about structure.
- Remember that a report is usually an informative piece of writing with headings.
- If you haven't been asked to use a set structure, you can often make up your own headings based on topics or themes.
- If in doubt, **ask your tutor for guidance**.

> *We usually do essays, so when we were told to write a report it just meant we could use headings, graphs and bullet points.*
>
> *(3rd-year Politics student)*

> *Some lecturers want us to follow their structure for reports, but others want us to think of our own headings. It took me a while to realise that.*
>
> *(3rd-year Business and Management student)*

Whatever kind of report you are writing, before you embark on your investigation, define your task:

***What* am I being asked to do?**	**Note …**
What does the brief tell me about my investigation?	
Are there specific things that I need to include in the report?	

***Who* am I writing for?**	
Who are my audience?	
What do they want to find out?	
What do they know already?	
How will they use the information?	
Are there secondary audiences who will see my report too?	

***Why* am I being asked to do it?**	
Why is the report being written – what am I being asked to find out?	
Is the purpose of the report to inform, test, persuade, advise, recommend … ?	
Have I been asked to make specific recommendations based on my findings?	

***How* do my audience want the information presented?**	
What is the word count?	
What guidance have I been given on structure, format and layout?	
What style of referencing is required?	
Do I need to submit it electronically or on paper?	

***When* do my audience want the report?**	
When is the deadline?	

2 Gathering your information

Aims and objectives

Sometimes your investigation calls for you to establish your 'aims and objectives' – particularly for longer reports or dissertations. People often get 'aims' and 'objectives' confused and find it hard to distinguish between them. This is not surprising as major dictionaries usually define them as meaning the same thing.

However, in the context of a report:

- The **aims** are the overarching things you want to achieve.
- The **objectives** describe in more detail *how* you are going to achieve them.

By asking you to identify aims and objectives, your tutor wants you to break down and define your task more clearly.

For example, take the following brief:

> *Investigate whether the university should create more alcohol-free social spaces on campus.*

This is a very broad brief, so establishing aims and objectives can help give your investigation a more concrete focus.

Brief	**Aims** (what you want to achieve)	**Objectives** (how you will achieve your aims)
Investigate whether the university should create more alcohol-free social spaces on campus.	1 Establish whether there is student demand for more alcohol-free social spaces on campus.	(a) Observe how frequently and for what purposes the existing alcohol-free café bar is used by students.
		(b) Assess students' opinions on opportunities for alcohol-free socialising – including their health concerns and views on UK drinking culture.
	2 Identify whether creating more alcohol-free social spaces would be cost-effective for the university.	(a) Evaluate the current profit/loss of the existing alcohol-free café bar.
		(b) Conduct a cost–benefit analysis for alternative sizes, locations and designs of alcohol-free social spaces on campus.

Even if you don't have to create specific aims and objectives as part of your report, you still need to identify **what you need to find out** and **how you are going to find that out** before you can go any further with your investigation.

What do you need to find out?

In order to find the information that your readers want, you need to clearly identify the problem and to break it down into specific steps.

If you are not sure where to start … ask **SO WHAT?** Think about the topic, the audience and the purpose of the investigation:

This question forces you to think about:

- *What* … do your audience see as the key issue or problem?
- *What* … are your audience's key concerns about the issue or problem (why do they care)?

When supervising any of my students, from first years to PhDs, I always ask them 'So what?' … it makes them link back to the real world and the possible applications of their experiment.
(Head of Food Science)

- *What* … will your audience do with the information you gather?
- ***So what*** … do you need to find out to provide your audience with information to answer their problem?

Imagine you have been given the following brief:

> *Examine whether luxury-brand cosmetics companies should adopt online viral marketing strategies*.

SO WHAT?

What do your audience see as the key issue or problem?

- New technologies may enable luxury cosmetic companies to reach new customers, or to reach existing customers more effectively. Do luxury cosmetic companies need to take advantage of this trend?

What are your audience's key concerns about the issue or problem (why do they care)?

- If luxury cosmetic companies don't develop their marketing strategies, rival companies might use innovative strategies more effectively and increase market share.

What will your audience do with the information you gather?

- They will use it to help decide their marketing strategy, making decisions about the risks and benefits of adopting an online viral marketing campaign.

So what do you need to find out to provide your audience with information to answer their problem?

- What types of online viral marketing strategies are there?
- Who are the target consumers of luxury cosmetics?
- How do these consumers use the internet and how do they perceive online marketing?
- Which online viral marketing strategies would be best suited to reaching these target consumers?
- Would using these strategies benefit the cosmetic companies?
- What are the risks of *not* using these strategies?

Asking 'So what?' has a dual purpose: first, it makes you consider the implications of what you are trying to investigate and then, with those implications in mind, you can decide what you need to find out.

How will you find this information out?

Once you have identified what you are trying to find out, you need to consider how you will gather this information. This will involve considering the *methods* you will use.

The methods you choose need to be fit for purpose and suitable for answering your aims and objectives, or your research questions.

In general, the methods you use can be divided into two categories:

- **Primary research**: You collect original data first-hand by doing experiments, carrying out case studies, interviews or surveys, or conducting focus groups, etc.
- **Secondary research**: You find and analyse data already collected by someone else – for example, reviewing existing literature or analysing existing statistics.

Many types of report you write at university will involve a combination of both primary and secondary research – for example, background reading (secondary research) to put the investigation you are conducting (primary research) into context.

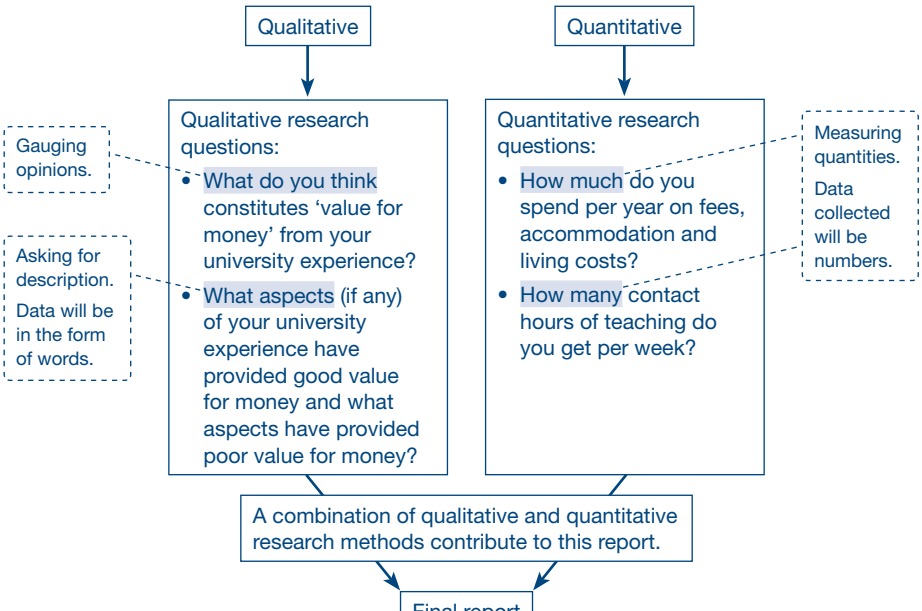
The research you do can be further divided into:

- **Qualitative research**: Gauging people's feelings, attitudes or behaviours – for example, using interviews, focus groups or case studies. This usually involves asking open-ended or semi-structured questions.
- **Quantitative research**: Testing hypotheses by gathering numerical data or data that can be turned into numbers to be analysed – for example, measuring specific variables, or using questionnaires with multiple choice answers. This usually involves creating standardised questions that provide measurable answers.

Imagine you are asked to write a report investigating the question:

> *Does the current university education system provide good value for money for students?*

The idea of ‘value for money’ is complex – some of the research you need to do will be qualitative and some will be quantitative:



For more on the differences between qualitative and quantitative research and their relative advantages and disadvantages, see 'Analyse This!!!' at www.learnhigher.ac.uk/analysethis/index.html

It is likely that for many of the reports you are asked to write at university, your tutor will give you an indication of the methods you are expected to use. Sometimes you may be set report assignments specifically to enable you to learn certain methods (e.g. lab reports).

For longer projects and dissertations where you have to set your own research questions, you will be expected to apply what you have learned throughout your course to decide on the most appropriate methods to use.

For more on different research methods and how to find your data, see Thomas (2017a), *Doing research* (in this series).

My university librarian showed me how to locate company reports and government statistics online.
(3rd-year Business and Management student)

When deciding how to find out the information you need to write your report, start from what you want to find out, then consider these questions:

- Does the information already exist somewhere?
- Has someone else researched it, and if so how can I get hold of this information?
- Do I need to conduct my own research to find the information?
- Will I need to gauge people's beliefs and opinions (qualitative research) or to gather numerical data and test hypotheses (quantitative research)?

Planning your time

In working out *how* you intend to find out the information, you will need to consider *how long* you have to find this information.

A key part of conducting any investigation is planning your time. Trying to estimate how long stages in an investigation will take can be unpredictable and difficult … and in an ideal world there will always be one more book you could read, or one more person you could interview.

A better strategy is to start with what is fixed and limited – the amount of time you have.

- Start with your assignment deadline and work backwards.
- Break your investigation into main stages and allot a certain amount of time for each stage.
- Set your own interim deadlines for when you will start each stage and (more importantly) when you will stop that stage and move on to the next one.
- Build in some contingency time (especially if you will have to rely on other people responding when you are collecting your data).

For example:

Task	Get brief; start thinking of ideas	→	Start back-ground reading	→	Finish back-ground reading	→	→	Write introduction		
				Start info gathering	→		Finish info gathering			Write abstract
					Start writing methods	→	Finish methods; start writing results	Continue analysing results	Write discussion and conclusion	Proof-reading and final checks **HAND IN**
Week	1	2	3	4	5	6	7	8	9	10

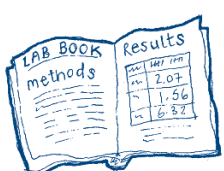
If you are doing lab reports, you will probably be writing them up over a much shorter period of time, say 1 to 2 weeks, but you will be expected to do less background reading and of course you'll have already conducted the investigative part in class.

I start writing up my lab reports as soon as we've come out of the practical – the methods and procedures are fresh in my mind.
(2nd-year Chemistry student)

For more on how to break up a report into stages and create an assignment plan, see *ASK: Assignment survival kit* from the University of Kent: www.kent.ac.uk/uelt/ai/ask/index.php

Recording your findings

The way you record your findings depends on what you are investigating, but here is a good basic check: *Will you be able to find everything you need again and make sense of it all when you come to compile your final draft?*



Recording your findings is about more than just being organised; it helps you start to structure and make sense of what you are investigating as you go along.

See the next page for some tips from students on what to consider when recording your findings.

Always note down page numbers for anything you've read – even if it seems unimportant – it may become vital later on.

It can be a real pain having to transcribe interviews from a recording, so I take my own notes as I do the interview and use the recording as a back-up to clarify anything I've missed.

I was observing people's habits in airport departure lounges – I started by writing long descriptions of what everyone did but soon found I could use tables to record a tally and make brief notes.

I had to do case studies based on my professional placements. It was easier to keep track of what I did by writing a diary entry each day than trying to remember it all at the end of the week.

Our lecturer used to collect in our lab books at the end of each practical class so we couldn't mess around and forget to fill them in later.

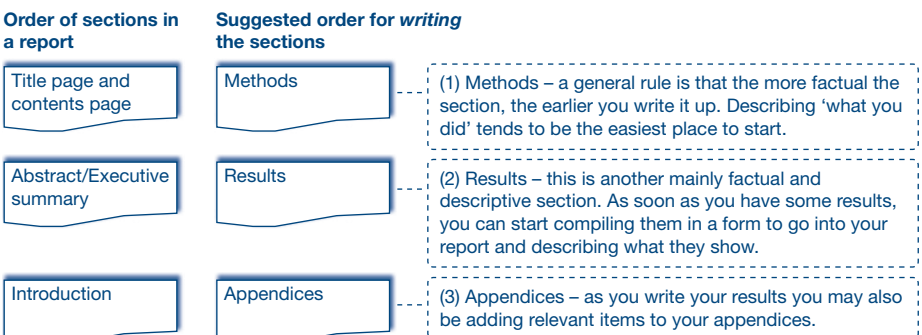
I learned from a few late-night panics to always record the full bibliographical details of everything you read and keep your references up to date as you go along!

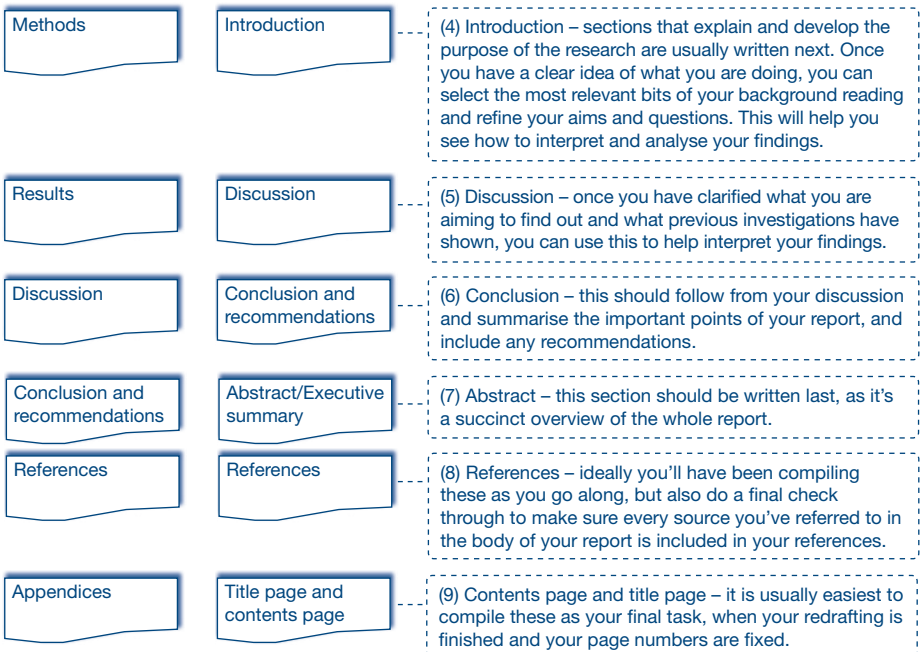
A lab technician threw out my soil samples – total nightmare. I was able to salvage something as I'd kept a record of what I'd found so far and notes on what each sample held. I was able to describe what I would have found out and get marks anyway.

Writing up as you go along

People often mistakenly think that, because a report is an account of an investigation, it can only be written up *after* you have finished conducting the investigation. However, research is unpredictable, potentially open-ended, and doesn't often go in a neat linear direction … so waiting until you have completely finished before writing up may leave you with little or no time left.

Writing up sooner rather than later will help you clarify your thinking and identify any gaps in your investigation that you need to fill with more reading or research. It breaks up the writing process and avoids having an overwhelming task at the end.





Adapted from LearnHigher report-writing webpages: www.learnhigher.ac.uk/writing-for-university/report-writing/

Writing up as you go along doesn't necessarily have to be in full sentences or in the best academic style (at this stage!) – it is simply to make your life easier. You can make notes under the relevant headings of your report and expand them later. Alternatively, try 'free writing' (write continuously for a set time period, say 10 minutes, without stopping or editing).

Develop a habit of writing up as you go along – it doesn't matter *how* you do it, as long as you do it!

Planning your report

It can be tempting to think that you don't need to plan your report as the structure has been provided for you by the headings. But don't skimp on the planning stage! Planning a report is as important as planning an essay, especially as some of the sections can be quite long and detailed. The headings are a good start, but often the information under each heading needs to be thought through and organised beforehand.

Here's a simple 5-step process to get you started:

1. Write out all your headings.
2. Under each heading, note down key information to include in that section, such as the number of participants.
3. Also under each heading, note down the main points you want to make in that section.
4. Group similar points together and discard any irrelevant points.
5. Read through your whole plan and identify the key messages you want to convey, e.g. what your main findings are, and why they are important. Make sure these messages are consistently communicated throughout your report.

Report headings mean that you can plan each section separately when you need to. Start with an outline and then add more detail under each heading as your investigation or experiment progresses.

Sample report plan: Psychology

Conduct an experiment to assess the relationship between university students' study habits and their level of anxiety before tests.

Abstract – WRITE THIS LAST!

Introduction

Active learning strategies are more effective (Turner, 2012)
Being better prepared for tests reduces anxiety (Hood, 2015)

- *Aims – to explore the relationship between methods of study and levels of test anxiety in university students*
- *Hypothesis – in a period close to when a test is due, students who use more active learning strategies will show significantly lower anxiety scores than those with more passive study habits*

Method

- *Participants*
  - *20 x 18–20-year-olds from first-year Psychology degree*
  - *10:1 female to male ratio (not 1:1 ratio because using an opportunity sample from a class with far more female students – A LIMITATION!)*
  - *Opportunity sample from lab class*

- *Experiment design*
  - *Mixed methods*
  - *Use of standardised anxiety ranking questionnaire (Likert scale)*
  - *Participants self-report on scale –> IS THIS A LIMITATION IN DESIGN? MENTION IN DISCUSSION*
  - *Also semi-structured interviews about study habits*
- *Apparatus*
  - *Printed questionnaires and semi-structured interview questions*
  - *Recorder to capture interviews*
- *Procedure*
  - *Hand out questionnaires in lab class 2 days before end of term test*
  - *Participants complete in class*
  - *Interviews conducted individually in separate room*

Results

The mean anxiety score for the 'passive study habits group' (12.36, SD 2.85) was smaller than that for the 'active habit group' (16.54, SD 3.7)

Discussion

Hypothesis wrong –> WHY?

Students who have better study habits likely to be more conscientious (Webb, 2014) – so possibly more anxious too? –> CHECK REFERENCE!!!

EXPAND DISCUSSION ... MORE NEEDED

Conclusion – PLAN THIS LATER

Reports aren't written in a strictly linear sequence, so neither are they planned all at the same time – you can use your plan to note down questions to yourself and points to follow up later.

You can fill out sections of a report plan in more detail later, once you are ready to write this section.

Sample report plan: Business

Select a retail company that is looking to diversify into another (related) market. The company directors would like you to write a report analysing the decision to diversify and its likelihood of success.

Introduction

- *Selected SaltWave – clothing retailer with a strong nautical-themed brand*
- *Wants to diversify into homewares, e.g. bedding and soft furnishings*
- *Other mid-range clothing retailers starting to move into this market, but main competitor (Seascape) hasn't yet – might gain competitive advantage or might get left behind!*

SaltWave's strategic assets and market share

- *Owns 118 shops plus 35 concessions in department stores*
- *Last year, profits doubled to £7m on sales of £44.6m (SaltWave Annual Report, 2016)*
- *Is the leading 'nautical themed' clothing retailer in the market → NEED FIGURES TO BACK THIS UP!*
- *Loyal customer base → WHAT EVIDENCE FOR THIS?*
- *Has strong network of textile suppliers already (Nielsen, 2016)*

Rationale for diversification into homewares

Profits are growing but retail rents are rising – by 7.8% in 2015 – (Savills, 2015) so difficult to expand by increasing no. of shops

- *Other clothing retailers are moving into this new market (6 clothing brands start soft furnishings lines – Financial Times, 2016)*

Include important figures/statistics and the vital references in your plan.

- *Main competitor, Seascape, hasn't yet so could capitalise first*
- *WHAT ABOUT ROLE OF ONLINE SHOPPING?*

Analysis of diversification → SHOULD I DO A 'SWOT' ANALYSIS HERE AND REORGANISE HEADINGS?

- *Company organisation*
  - *Strong corporate structure and identity – could cope with diversification*
  - *Good internal leadership programme – diversification brings new opportunities for staff development*
- *Suppliers, production and distribution*
  - *Good relations with textile suppliers – could easily move into production of bedding/soft furnishings*
  - *Issue with logistics of distribution – larger, bulkier items? Greater delivery costs?*
- *Retail space*
  - *Rising rents – creation of new stores = difficult*
  - *Would there be space in existing stores for larger homeware items?*
  - *Could homewares be sold online only to start with? → DEVELOP THIS!*
- *Marketing and customer base*
  - *Loyal customers – mainly young to middle-aged couples – ideal target*
  - *Strong visual identity – could carry well into furnishing design*

Measures of success → NEED A THEORY OR FRAMEWORK HERE!

Conclusion and recommendations

Diversification likely to be successful in terms of expansion opportunities, but rest of company may need to absorb some initial costs re distribution, etc. Recommend bulkier items sold online only initially → grow online presence first.

Sometimes the choice of theory or mode of analysis helps to determine the report structure – in this example, if you chose to use a **SWOT** analysis, you could change the current thematic headings to **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats, and you could then reorganise the points under these headings instead.

It's easier to experiment with different ways of structuring at the planning stage than when you're half-way through writing!

Managing group reports

Group work is becoming increasingly common at university as it helps in the development of skills such as teamwork, leadership and project management, which are highly valued by employers. Often these group assignments involve writing a report as one of the outcomes. Reports are well suited to group work: they are designed to communicate the results of a collaborative investigation or research process; they are divided into sections, which makes co-authoring and co-editing easier; and they mirror the kinds of writing you are likely to do in the workplace, often in teams.

The first stage to a successful group report is to try to ensure that the group works together effectively as a team.

It's a good idea to agree on some basic ways in which the group will communicate and be organised:

Think about:

- **When to meet** – pick times that suit everyone.
- **Where to meet** – pick a place that is accessible to all group members. You may need to book rooms in advance.
- **How best to keep in touch** – share emails and phone numbers and agree the easiest way to communicate. You might use social media if everyone is happy with this.

- **A realistic schedule** to complete your task.
- **The importance of being committed** to the group, and turning up and participating.

A key aspect of good group organisation is **starting and finishing** each meeting with everyone knowing what they are expected to do.

- Start by **agreeing on the objectives** for the group – what do you want to achieve in this session?
- Keep focused by having **a list of tasks** or issues to cover.
- Perhaps select someone to **take notes** and keep track of what is agreed.
- End by summarising **what has been agreed on** in the meeting.
- Ensure that all group members understand **what they have to do** for the next meeting.
- Agree on a time and place to **meet again** if necessary.

It's stressful when people don't cooperate or contribute to the group. There may be many reasons for this (Do they understand the task? Do they feel excluded? Are they shy?). Don't immediately assume it's because they don't care. Try talking to them to see if there is anything the group can do to help them contribute.

Taken from University of Reading (2016)

For more on how to troubleshoot issues when working in groups, see Hartley and Dawson (2010), *Success in groupwork* (in this series).

However, there are some elements to managing a group that are specific to writing reports.

If you're writing a report as part of a group-work project, the first thing to find out is whether you are being asked to:

- conduct the research or investigation together, but write up separate individual reports

or

- produce a single, jointly authored report from the whole group.

If in doubt, ask your tutor. It's important not to duplicate work unnecessarily or to find that you have submitted a single report when your tutor was expecting an individual report from each of you.

Individual reports

If you're being asked to write up *individual* reports, it's very important that you respect this – you don't want to be accused of collusion. It's fine to work together when doing the research or the experiment, but make sure that you plan and write up the reports

separately. If you think you may accidentally copy or collaborate on this writing-up stage, agree with other group members that you will work in different places so that there is no temptation.

If you are concerned about collusion or how to distinguish your work from the work of others, see Williams and Davis (2017), *Referencing and understanding plagiarism* (2nd edn, pp. 70–77), in this series.

Joint reports

If you're being asked to write up a *joint* report, you need to think about how to coordinate the writing process so that you produce one coherent document.

The headings in a report make it easier to divide up the writing between the members of the group, but this can lull you into a false sense of security, thinking that it will be simple. Managing group writing can be trickier than the actual research itself – especially as the writing-up often comes nearer the deadline, when everyone is under greater pressure.

Think about:

- How will you **divide up the writing process** – will each person write a separate section of the report?
- How will you **ensure the division of work is fair**? Some sections will be longer or more complex than others.

- Will you each save your section on your own computer or will you use **a shared document that you can edit jointly**?
- How will you **agree interim deadlines** to give enough time for redrafting and final checks?
- What will you do **if someone isn't replying or producing any writing**?
- Will one person be responsible for **ensuring consistency of style and formatting**?
- Will someone have **oversight of the references and final proofreading**?

Google Docs was really helpful when writing our group report. We could all share, comment on and edit the same document. It stopped us getting confused about multiple drafts.

(2nd-year Real Estate and Planning student)

Although English is my second language, I volunteered to do the final read-through of our group report. I'm better at spotting grammar errors than some of my friends – but they helped me correct them.

(3rd-year Food Science student)

I'm glad we decided on someone to check the final references. After all our individual edits to our own sections, the reference list had got totally muddled.

(1st-year Chemistry student)

3 Structuring your report

A report gives a logical and ordered structure to an investigative process. The sections help readers to know what to expect and where to find the information they need. As each section of a report does a different job, each has a different writing style to suit.

This chapter looks at the main sections of a report in turn, explaining their purpose in the overall report, what they should contain and how they should be written. For each report section, the diagram on the left shows where the section comes in the report structure and the other sections that are related to it.

It is likely that your report will contain some, if not all, of the following sections, but these are just a guide. You should follow the specific instructions given to you by your tutors, as different academic subjects and professions have their own variations on this structure. (For an example of one variation, for a business report, see 'Types of reports' in Chapter 1: p. 20.)

Respect the formal structure of reports, but see this structure as a communication tool, not as a set of rigid rules.

Which section should this go in?

People often feel intimidated by the formality of report structures and anxious about which section information should go in, but if you consider the purpose of your piece of information and its role in your report you will know which section is appropriate:

- Does it provide background to your research? (*Introduction*)
- Does it describe how you collected evidence? (*Methods*)
- Does it present factual data? (*Results*)
- Does it analyse the evidence in the context of background reading? (*Discussion*)
- Does it summarise key findings and make recommendations? (*Conclusion*).
  (Adapted from University of Reading, 2017c.)

> The **introduction** and **discussion** sections are likely to be the longest and contain the most critical analysis … and therefore to be worth the most marks!

Title and contents pages

Professionally produced reports normally have a title page and a contents page so that readers know who is responsible for the document and can find information easily. If you are writing a long report for a project or dissertation, you will probably need to include a title page and a contents page.

A title page clearly shows your name, your report title and the date the report was completed.

The contents page is an outline of the structure of your report, showing the headings of the various sections and the pages on which they start. A clear, easy-to-read contents page will help your tutor understand the report's structure (and it will put them in a good mood!).

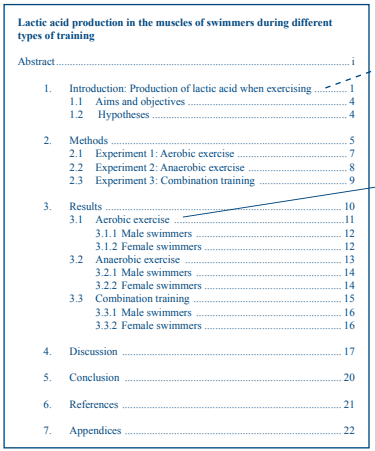
If you are writing a longer report or dissertation that needs a table of contents, you can save time. Almost all word-processing software (such as Microsoft Word and Pages for Mac) can generate a table of contents automatically – but consistency is key!

Use the 'heading styles' function of your software to ensure that all of your headings are consistent – for example, use 'Heading 1' for all your main headings, 'Heading 2' for all your sub-headings, and so on.

Then you can insert a contents list that will automatically have the right headings and the corresponding page numbers, and you can also update it automatically.

For more detailed instructions, search online for simple step-by-step guides for the specific version of your software.

Sample contents page for a report



Lactic acid production in the muscles of swimmers during different types of training

Having lines across to the page numbers makes it easier to read – important if your manager/tutor is searching for a specific section.

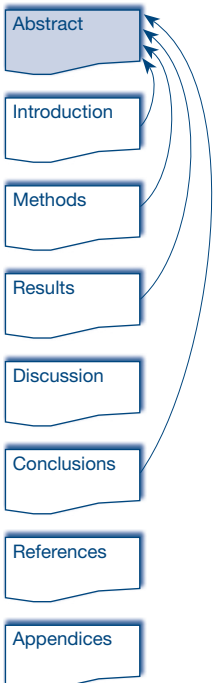
To compile a useful contents page, you need to have a logical system for numbering your sections.

A common system is decimal notation:

- Main headings are numbered in sequence (1, 2, 3).
- The levels of sub-headings under this are numbered after the decimal point: 1.1 for the first level, 1.1.1 for the next level, etc.).

However, some businesses and some university tutors dislike the headings fragmenting to the sub-sub-level of 1.1.1.

If this is the case, group similar ideas together and have fewer levels of headings or change Word's table of contents settings to include level 1 and level 2 headings only.



Abstract / Executive summary

This is a concise summary of your whole report. It helps your readers decide whether they want to read the whole report – it acts like your 'shop window'.

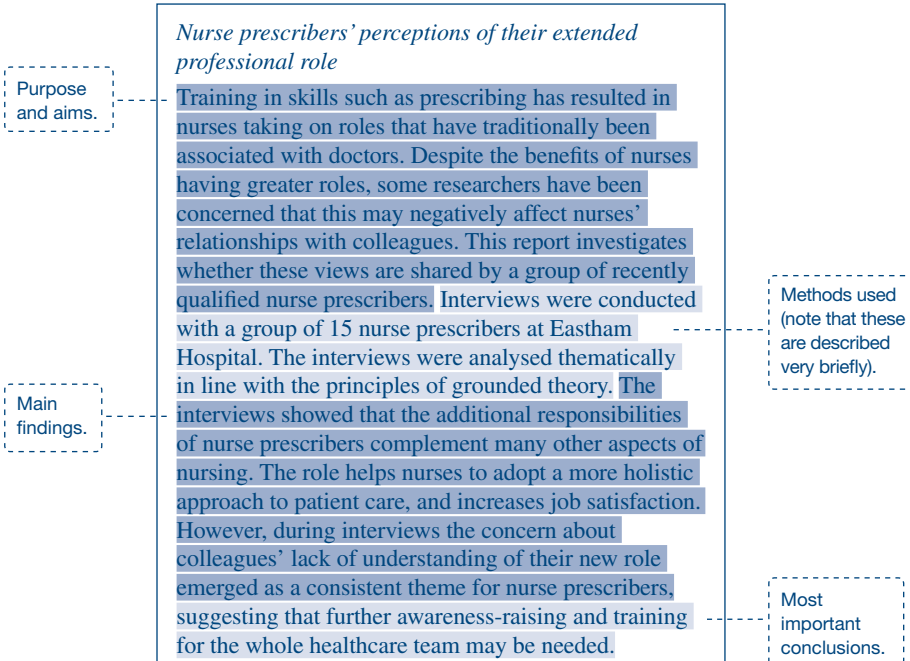
Sometimes the abstract or executive summary is the only part of the report that people read, so it has to stand on its own and give a fair and useful reflection of your work.

Abstracts are most commonly found in research reports. They give an overview of the key aims, methods, findings and conclusions.

As the abstract summarises the whole report, you should write it last. It should be only about 200 words or fewer, and is normally written as one paragraph.

It should contain a sentence or two about the:

- purpose and aims
- methods used
- main findings
- most important conclusions.


Nurse prescribers' perceptions of their extended professional role
Purpose and aims.
Training in skills such as prescribing has resulted in nurses taking on roles that have traditionally been associated with doctors. Despite the benefits of nurses having greater roles, some researchers have been concerned that this may negatively affect nurses' relationships with colleagues. This report investigates whether these views are shared by a group of recently qualified nurse prescribers. Interviews were conducted with a group of 15 nurse prescribers at Eastham Hospital. The interviews were analysed thematically in line with the principles of grounded theory. The interviews showed that the additional responsibilities of nurse prescribers complement many other aspects of nursing. The role helps nurses to adopt a more holistic approach to patient care, and increases job satisfaction. However, during interviews the concern about colleagues' lack of understanding of their new role emerged as a consistent theme for nurse prescribers, suggesting that further awareness-raising and training for the whole healthcare team may be needed.
Methods used (note that these are described very briefly).
Main findings.
Most important conclusions.

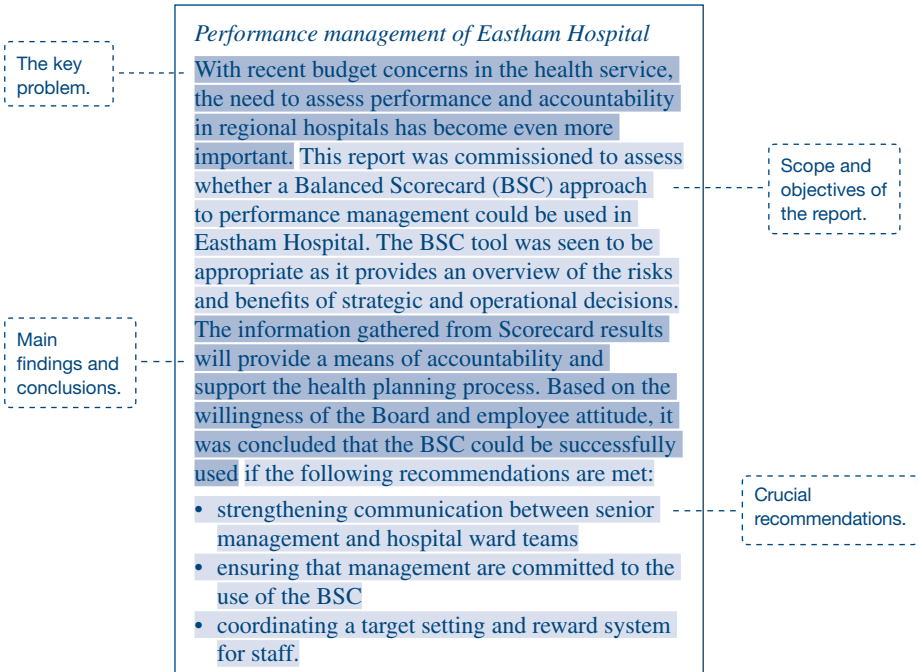
If you find it hard to start writing your abstract, try highlighting the key sentence from each section of your report. Cut and paste these sentences together, then read through them and redraft them into a workable abstract.

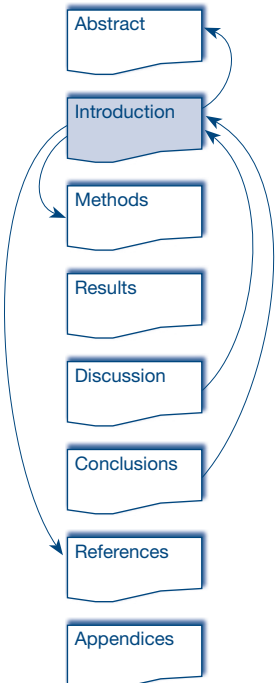
An **executive summary** is more commonly found in business reports. Whereas an abstract has an academic focus, an executive summary is very practical. It is usually aimed at those at the higher level of management, and is designed to give them all the information they need to make a decision based on reading only the executive summary.

It too is written last. It can be slightly longer than an abstract (usually one or two paragraphs, or a page for longer reports) and can sometimes include bullet points to highlight key recommendations.

It contains a sentence or two about the:

- key problem
- scope and objective of the report
- main findings and conclusions
- crucial recommendations.


The key problem.
Performance management of Eastham Hospital
With recent budget concerns in the health service, the need to assess performance and accountability in regional hospitals has become even more important. This report was commissioned to assess whether a Balanced Scorecard (BSC) approach to performance management could be used in Eastham Hospital. The BSC tool was seen to be appropriate as it provides an overview of the risks and benefits of strategic and operational decisions. The information gathered from Scorecard results will provide a means of accountability and support the health planning process. Based on the willingness of the Board and employee attitude, it was concluded that the BSC could be successfully used if the following recommendations are met:
• strengthening communication between senior management and hospital ward teams
• ensuring that management are committed to the use of the BSC
• coordinating a target setting and reward system for staff.
Scope and objectives of the report.
Main findings and conclusions.
Crucial recommendations.



Introduction

Your introduction does two main jobs:

1 It introduces the **context** of your investigation – it explains what you have been asked to investigate, why this is important and how you are going to respond to your brief.
2 It analyses the **background literature** that relates to your investigation.

The introduction is usually written in an analytical style, comparing and contrasting relevant studies and explaining how other people's previous research is relevant to your investigation.

The extent to which you refer to the background literature depends on the purpose of your report:

- *Business reports* – These often have short introductions and focus more on explaining the reason for commissioning the report and the key issue to be investigated rather than analysing background literature.
- *Lab reports* – These are short and concentrate on single experiments, so you need to refer to the most relevant previous studies.
- *Research reports and projects* – These assess your research skills, so you need to demonstrate wider reading and the ability to place your work in the context of a broader range of background literature. Sometimes longer projects and dissertations have a separate literature review section (see pp. 93–97).

The first few paragraphs of your introduction will put the report in context, explaining why it is needed. It will state the main purpose of the report and show how you plan to respond to the brief.

Propose a new marketing campaign for HomeFarm Foods

The rise in organic food producers over the last decade means that just being able to demonstrate that your food is organic is no longer a unique selling point. As a result, HomeFarm Foods, a previous leader in the organic food market, has seen its market share reduced by 15% (Mintel, 2016). The purpose of this report, commissioned by the marketing managers of HomeFarm Foods, is to propose a campaign to regain HomeFarm's dominant position. Young people are eating more ethically and locally produced food (Biz Premier, 2017), which suggests that this would be a profitable area of expansion for HomeFarm Foods. Therefore, this report will focus on a campaign to sell HomeFarm's locally sourced seasonal fruit targeted at 16–18-year-olds, who are able to influence their parents' purchasing decisions …

Context and need for the report.

Clear statement of main audience and purpose for the report.

In business reports, the background reading you refer to may be market figures and trends rather than purely academic texts.

Responding to the brief by narrowing the focus and justifying this.

Then the introduction should present an analysis of what the background literature says about the topics of the report, and assess the strengths and weaknesses of these previous studies. For example:

Only the relevant points of the study and the theory are mentioned briefly – but you need a confident and thorough understanding of the studies first to be able to refer to them so concisely.

Investigate the accident-reporting mechanisms in a local workplace and assess them according to relevant Health and Safety guidelines

… Skepper's study introduces a new model for assessing the dangers of workplace injuries (2017). He identifies the overall total damage done as more important than the frequency of injuries (Skepper, 2017). However, this model does not fully consider Archer's theory of 'under-reporting', which states that people are less likely to report frequently occurring small accidents until a critical mass of injuries is reached (2015) …

Comparing two different approaches and using one study to identify a weakness in the other – **don't simply summarise each study in turn!**

For more sample sentences and models for how to refer to your background literature concisely, see the Academic Phrasebank: www.phrasebank.manchester.ac.uk/

The studies you write about in your introduction will be the ones you refer to again in your discussion section to help interpret your results.

If your report has a **hypothesis** or **aims and objectives**, the appropriate place to put these is at the end of the introduction, showing how they have been based on and derived from the previous research.

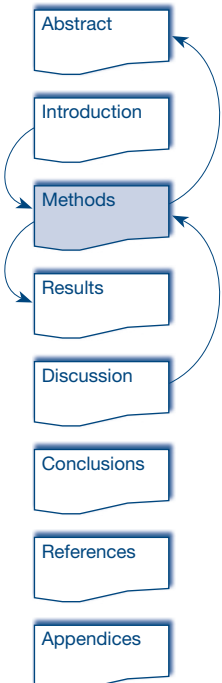
Showing how the hypothesis for this experiment has been derived from a previous study.

The effects of variations in perspective on the perception of the Schroeder Staircase

… According to Gregory's (1974) account, if adding increasing amounts of perspective affects the depth interpretation of the figure, then the number of perceptual alterations should reduce and/or the time for which the figure appears in perspective should increase.

The hypothesis – what you expect to happen.

Example from Professor John Harris's report-writing guide for the Department of Psychology, University of Reading.



Methods

In your methods section you need to describe what you did to conduct your investigation. You should also justify why you chose the methods you did (case studies, interviews, focus groups, experiments, etc.).

Normally **business reports** don't include a methods section, as managers are more concerned with *what to do* with the information than *how* it was collected.

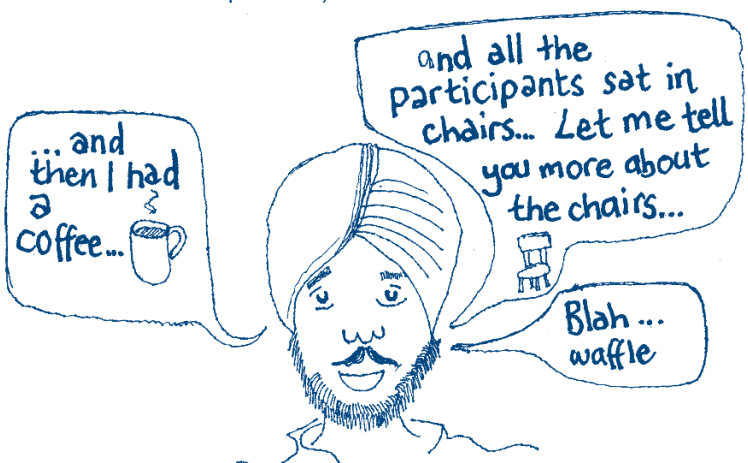
As the methods are descriptive and follow a step-by-step procedure of what you did, it is usually a good section to start writing first.

However, don't underestimate the methods section – it can be tricky to get the appropriate level of detail and description. For example, in an experiment measuring people's reaction to

The methods section in Psychology reports is usually split into the following subsections:
- *Participants*
- *Experiment design*
- *Apparatus*
- *Procedure*

Check your course guidelines for what your tutors want you to include.

images of spiders, it is important to include the distances of the participant from the viewing screen (as this would directly affect their perception and sense of threat), but it is not necessary to go into great detail describing the room, the desk and the chair that were used in the test (as these were the same conditions for all participants and had little influence on the experiment).



The incidence of code-switching in Malaysian university students studying in the UK

Participants were asked to keep a Language Diary for a period of 24 hours in which they recorded all conversations, describing choice of code, topic of the interaction and role of the principal speaker. The Language Diary based on Stark's design (1990) was used as it minimises some of the problems associated with other methods, such as observation in which the observer may influence the target behaviour, and questionnaires in which participants may not have enough awareness of their language behaviour to respond to questions on this topic.

[…]

An email request was sent to all first-year Malaysian students at the university. From the 23 respondents, eight participants (two from each faculty) were selected to provide a range of arts and science subjects.

Justifying the choice of methods by referring to previous research, and explaining why other methods were not used.

If you have participants in your research, you need to explain who they were, how many there were and how you selected them.

Any piece of research needs to be repeatable so that someone else reading your methods section could use it to replicate your investigation.

Be precise and give exact measurements. Avoid using ambiguous terms like ‘test tube 1’ and ‘test tube 2’ that are meaningless out of context.

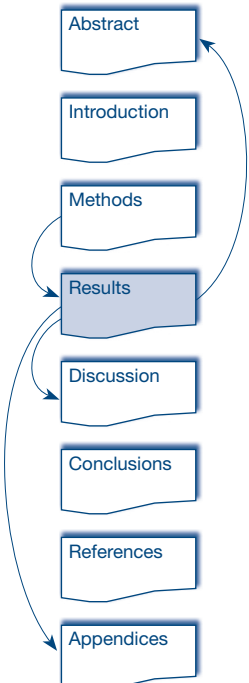
Testing the effect of different temperatures on enzyme activity

… The 5 test tubes were placed into water baths and left until they reached the required temperatures of 4°C, 25°C, 37°C, 60°C and 90°C. 2ml of 3% hydrogen peroxide was then added to each of these tubes.

Precise measurements.

You need to describe any specific techniques or specialised equipment that you used.

However, there is no need to say, for instance, that the hydrogen peroxide was added ‘using a pipette’, as this is standard scientific equipment that all scientists would use.

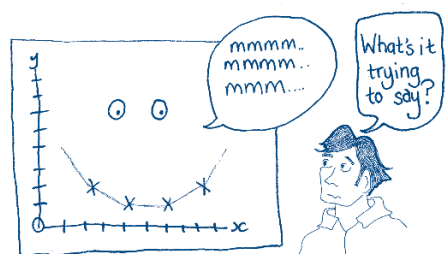


Results

It is vital to refer to your figures and graphs in the body of your report – for example, 'See Figure 3 ...'. Not doing this is one of the main shortfalls in the reports I grade.
(Biomedical Science lecturer)

The function of the results section is to describe your results in an orderly way, using both words and appropriate visual material (e.g. tables, graphs or diagrams). Label your graphs and tables clearly so you can refer to them easily, and describe the crucial trends and patterns that they show.

You need to describe in words what each table, figure, graph or diagram shows – they won't speak for themselves! (For more on presenting your findings, see Chapter 5.)



Usually you present your results in the same order as your research questions or objectives. This provides a logical sequence and links the results back directly to the questions you are trying to answer.

> Research is open-ended, so you will probably collect more data than you can present and interpret within the word count of your report. A good test of whether something is relevant is to return to your aims or research questions and your brief – how is what you are presenting going to help answer the brief?

- Present the data in one format only – as a table *or* a graph *or* a diagram. Select the most appropriate form for the trends and comparisons you want to show.
- Pick out for the reader the important *trends* in the data – avoid describing each individual data point in detail.
- Save all *interpretation* of the findings for your discussion section.

The effect of vocal training on acoustic voice quality in primary school teachers

… Before vocal training, only participant No. 3 was outside the jitter range for a healthy voice (> 1.040% jitter: Boersma & Weenink, 2005). As shown in Table 5, all participants demonstrated a reduction in the percentage jitter in their voices following vocal training.

Table 5: Percentage jitter in participants' voices before and after vocal training

Participant no.	Jitter in voice (%)	
	Before vocal training	After vocal training
1	0.296	0.245
2	0.447	0.213
3	1.198	0.772

The table is clearly labelled with a descriptive title and is referred to in the text.

The main trend in the data.

Only one format is used in presenting the data. A table is used in this case, because the measurements – up to three decimal places – couldn't be shown so precisely on a bar graph.

Produce a report on the current sources of revenue for the Kings Head Hotel and propose a way of increasing this revenue based on your findings.

… Figure 3 shows that room rental provides the largest proportion of revenue for the Kings Head Hotel (43%) followed by drinks sold at the bar (37%). Car park fees make up 23% of the total revenue. The smallest proportion of revenue comes from food sold at the hotel restaurant (7%).

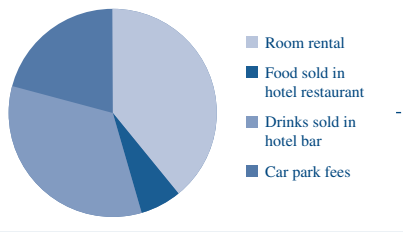


Figure 3: Proportion of sources of revenue for the Kings Head Hotel in 2018

Use of varied phrases to describe the results.

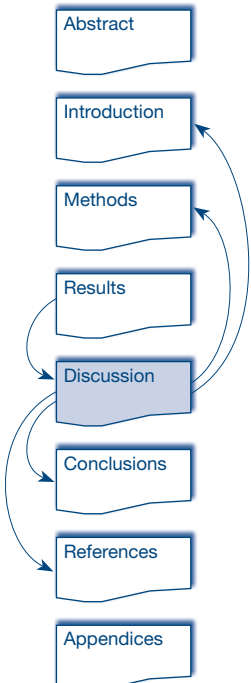
Avoid repeating the same sentence structure – e.g. '43% of the hotel's revenue comes from room rental. 37% of the hotel's revenue comes from drinks …' – as your readers will switch off.

The results are described objectively.

Even though it seems surprising that car park fees contribute so much to the total revenue, **any explanation for *why* this might be is left for the discussion section**.

Again, the data is presented in one format only – a pie chart is used in this case because the precise figures are not as important as the proportions contributed by the different revenue sources.

The figure is clearly labelled and referred to in the text.



Discussion

This section is where you interpret and explain your results, offering possible reasons why you got the findings you did. It is likely to be one of the longest sections and is written in an explanatory and analytical style.

You need to provide evidence to back up your possible explanations by referring to the previously published studies you analysed in your introduction section. Do the findings of previous studies offer possible reasons for your own results? Are your findings similar, or do your results depart from earlier studies and, if they do, why?

Using an international real estate firm as a case study, compile a research report analysing the links between financial services and real estate services in global cities.

… Hartfield and Wakeman are located near other real estate firms and financial service providers in the three global cities analysed in this report. This seems to support the advantages of agglomeration discussed by Clark (2002) and Taylor *et al.* (2003). However, it is difficult to identify whether real estate firms move to match the location of financial service firms, or vice versa, because of the general attractiveness of the cities sampled: the choice of office site may be influenced by the broad benefits of the city locations, as opposed to specific benefits of agglomeration. Research suggests that decentralisation and agglomeration occur separately and independently (Taylor *et al.*, 2003; Lizeri 2009). Yet when the two processes are analysed together in the case of Hartfield and Wakeman (see Figure 4), it appears that they occur at the same time. This may be due to the processes happening even more rapidly today, due to the need to respond to an unstable and changing economic situation.

A brief reference to the findings of this report.

There is no need to describe them in detail as you will have done this already in the results section.

An honest appraisal of the results. When it is difficult to tell what has caused something, say so – don't try to claim more than your results can show.

Using previous research to help interpret the results.

There is no need to describe Clark and Taylor *et al*.'s work in detail here, as you will already have analysed it in your introduction.

This shows where the results may differ from the previous research …

… and offers potential reasons why.

The example on the previous page uses tentative language like:

- 'This seems to support …'
- 'It appears that …'
- 'This may be due to …'

This is often called **academic hedging.**

It is not simply 'sitting on the fence' or being vague; using words like 'may', 'might' or 'possibly' shows that you are aware that you cannot give a definitive answer, but are attempting to explain your findings within the limitations of what you have investigated. The causation of your results may not be clear, or it may be that your findings cannot be widely generalised, so using tentative language is appropriate.

For more examples of academic hedging in explaining results, see the Academic Phrasebank: www.phrasebank.manchester.ac.uk/

The discussion is the appropriate place to **raise any limitations** or problems you faced and to assess to what extent these shortcomings affected your results. You may also suggest how the limitations could be overcome if the investigation were repeated or developed.

Are short-term memory and recall affected by an increase in age?

There were two main limitations with this experiment. One limitation was that there were not enough participants in the over-50-year-old age group to make a valid comparison with the other age groups. The second limitation was that the memory task (recalling strings of words) and the laboratory setting were artificial, so the experiment did not reflect the kinds of short-term memorising and recall used in 'real life' situations. This indicates that the findings from this experiment cannot necessarily be generalised to explain how memory operates in everyday life. If a more extensive study were carried out, tests that more accurately simulated 'real life' memory operations should be used.

Clear statement of limitations.

How the limitations affected the results.

What could be done to overcome the limitations.

In some business reports, the discussion section might not be discussing results but instead analysing information gathered in order to assess a course of action or a particular problem. (See 'What if your report has a different structure?' on pp. 83–84.)

Should ColaMax sponsor the building of a new skate park in Littleton?

Risks

The main risk associated with this project is cost. The starting costs of creating the skate park are high (see Table 2), and there is a risk of losing money if not enough people join the skate club or if partnerships with local schools are not found.

A further risk is the perception of the skate park by Littleton residents. If the park is regarded as a cause of antisocial behaviour, then ColaMax might be negatively associated with this behaviour.

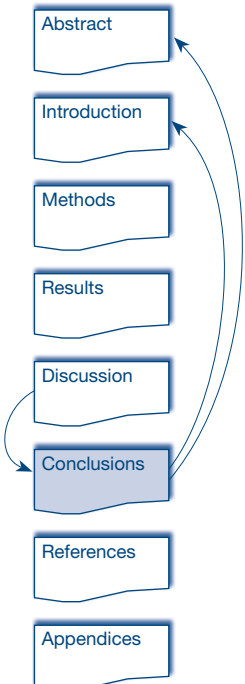
Benefits

A crucial benefit of the project is the potential increase in sales of ColaMax drinks due to higher product visibility. The skate park would have prominent ColaMax branding and would be located within the catchment area of four secondary schools with a total population of 8,400 students (Littleton Borough Council, 2015). A secondary benefit is an improved company image due to potential joint initiatives with the schools and local clubs …

Sub-headings help to break down the analysis of the problem.

Rather than 'strengths' and 'weaknesses', business reports may instead refer to 'risks' and 'benefits'.

If you are writing a business report for an imaginary client, you may be expected to refer in your discussion to figures, company data or statistics, as opposed to academic texts.



Conclusions and recommendations

This section sums up the key points you have made – it is a short section and it doesn't introduce any new information.

I get irritated with conclusions that end with 'further research is needed'. Further research is always needed – tell me what specifically needs to be researched and why.
(Psychology lecturer)

Usually a lab or research report will just have conclusions, but the brief for a report aimed at a real or imaginary client is likely to ask for recommendations as well.

Conclusions

- Look backwards to the original brief and **summarise the main findings** of your investigation.
- Let your readers know **why your findings are important.**
- Give the crucial **'take-away' message** that you want to leave your readers with.
- Include any **suggestions for further research**, if appropriate.

The conclusion is the section where you ask yourself **'So what?'** *So what* do my findings show, and *so what* does this mean for my readers – why should they care?

This helps you see both the wider context and the contribution that your investigation has made to your audience's understanding of the topic.

Relationship between hand, wrist and forearm circumferences and maximal grip strength

This experiment has shown that of all the data measured (hand, wrist and forearm circumference), hand circumference presented the strongest correlation with maximal grip strength. The correlation between hand circumference and maximal grip strength was evident in both male and female participants, and for both non-dominant and dominant hands. Using hand circumference alone, it is possible to predict maximal grip strength in adults. Given the suggested relationship between maximal grip strength and overall muscle mass, hand circumference may be a valuable indicator of general muscle health in adults.

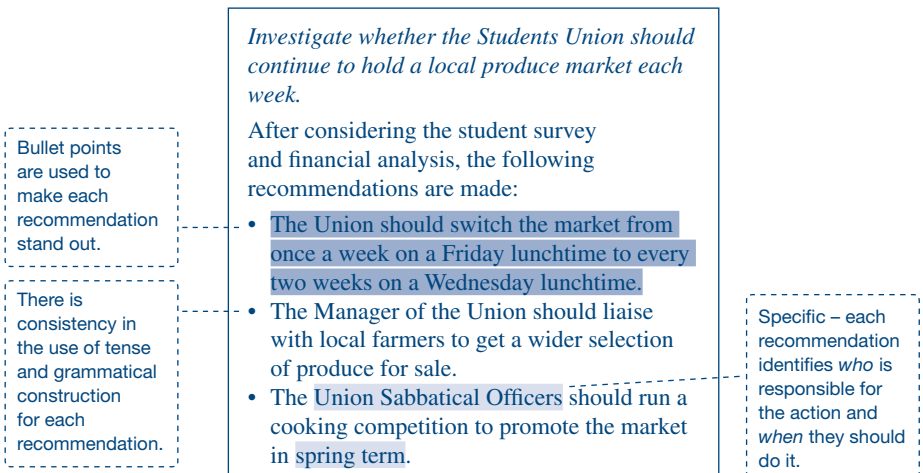
Brief summary of the main findings, related back to the original brief.

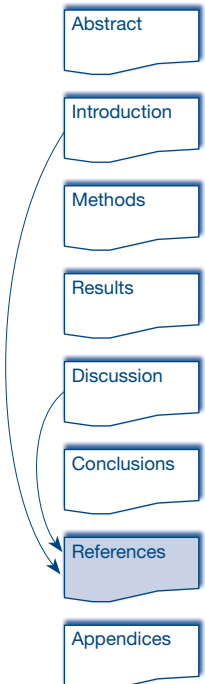
Clear statement of the 'take-away' message of the investigation.

Answering the 'So what?' question – why readers should care about these findings and their wider implications.

Recommendations

- Look forward and suggest specific actions that should be taken as a result of your investigation.
- Let your readers know **what they should do based on your findings**.
- State the crucial changes you want your readers to make.

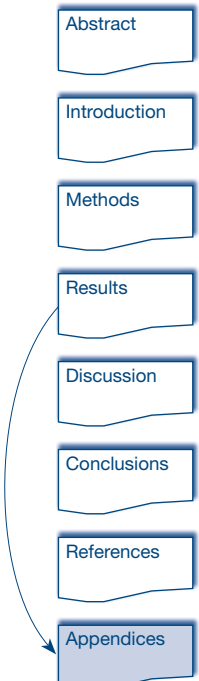




References

The references section comes next, and this contains the full list of any works you have referred to in the body of your report.

It is a good idea to compile your reference list as you go along, so that you can keep track of all your sources and avoid any last-minute panic – but do make a final check during the proofreading stage that all of the sources referenced in the body of your report also appear in your reference list, and vice versa.



Appendices

The appendices come last in your report and contain any additional information that is useful for your reader. This may include raw data, sample questionnaires, interview transcripts and the like – things that would be disruptive to reading if included in full in the body of the report.

However, the appendices are not a general dumping-ground for everything else you have collected during the course of your investigation! Each item needs to be selected and to have a purpose.

Make sure you *refer* to the items in your appendices, or your readers won't know they're there. Appendices are arranged in the order that they are referred to in your report. Label each appendix, and briefly refer the reader to it in the body of your report. For example, 'See Appendix A for the interview questions'. Start each appendix on a new page, and don't forget to add the heading 'Appendices' and the relevant starting page numbers to your contents list, if you have one.

What if your report has a different structure?

What if your investigation doesn't fit the 'introduction, methods, results, discussion, conclusion' model? Many **business reports** don't follow this format, both because companies often have their own report templates and because business reports need to be flexible and to respond directly to the needs of the client and the brief.

If you have not been given a report structure by your tutor, you need to create your own headings based on the brief.

Start from your brief and break it down into sub-questions, or separate issues, that you need to investigate – these could form the basis of your headings. Group similar sub-questions or ideas together, and find a sensible order for the headings that leads the reader through your investigation step by step.

Your headings need to be meaningful and descriptive, giving your readers a clear idea of the purpose and contents of each section.

Imagine you are given the following brief:

> *Investigate the feasibility of relocating Gino's Café to outside the city centre.*

The following headings would work well:

1 Executive summary
2 Reasons for proposed move
  2.1 Rising rent prices in the city centre
  2.2 Need for a larger venue
  2.3 Increased competition of cafés in city centre
3 Finding an appropriate new location
4 Renovating new premises
5 Relocation of employees
6 Marketing and creating a new clientele
7 Financial implications of moving
8 Conclusions and recommendations
9 References

Acts like an introduction – establishes the purpose of the report and why it's needed, and gives important background context.

Descriptive headings. The report sections break down the issues related to the relocation and deal with each in turn.

Financial section comes just before the conclusions, as it is derived from an analysis of all the other sections. Also, this is a crucial section, so it's easier for the reader to find if it's at the end.

4 Business plans, reflective placement reports, project proposals and dissertations

Business plans, reflective placement reports, project proposals and dissertations share many of the features of reports, such as a formal structure divided by headings. However, since they have different purposes to fulfil, there are some differences between these assignment formats and reports.

Business plans

Like other types of reports, business plans have a target audience and purpose; they are persuasive documents, designed to attract investors or collaborators. If you are being asked to write a business plan for an assignment, you need to convince your imaginary (or real) investors that you have a clear, realistic, financially workable idea.

The structure of the business plan depends on the needs of your proposed business idea and the needs of your potential investors, but plans usually cover the following areas:

- *Executive summary* – An overview to encourage your investors to continue reading.

- *Company description* – Background on your company, its aims and its plans for the future.
- *Management and organisation* – How your company is organised, the main members of the management team and their experience.
- *Market and competition* – Your research into the other products or services available in your market.
- *Product or service* – What are you offering and what is the unique selling point? How will you distinguish yourself from your competitors?
- *Marketing and sales* – How will you promote your product or service and ensure sales?
- *Financial information* – The most important section, and what investors are concerned about: this needs to be robust and to consider initial capital, expenditure and projected income.

For more on business plans, see Marsen (2007).

Many students describe viable ideas in their business plans but don't get good marks because they fail to give detailed financial information – no investor would stand for that!
(Management lecturer)

Reflective placement reports

Professional degrees, such as Pharmacy, Education and Social Work, and work placement modules within other degrees all require you to document your experiences in a workplace setting. These are often written up as a report-style assignment that asks you to reflect upon what you have learned.

This is how 'reflection' is defined in *Reflective writing* (Williams, Woolliams and Spiro, 2012):

Being reflective involves being:

- **open** to different ideas, seeing things from different angles
- **curious** – asking questions
- **patient** – if the issue is not 'simple' the answer probably isn't either (though it can suddenly jump out at you)
- **honest** with yourself, your uncertainties, what you're getting wrong – or right – and your writing needs to make this **transparent** to others, so they can see it too
- **rigorous** – being analytical, and acting on the insights you gain.

Reflection in a programme of study or professional context is a purposeful activity. It drives learning and change, and it's probably fair to say that no one finds change easy. Purposeful reflection can change how we think about things, what we do and how we do it, and can lead to specific changes in planning for what we do next.

Thanks to series editor Kate Williams for her kind permission to use this extract from *Reflective writing* (2012, in this series).

Reports as a format lend themselves well to reflection because they have:

- *A specific audience and purpose* – identifying these enables targeted and purposeful personal development. One main audience for a reflective report is yourself, as you are reflecting on what you have learned and how you will do things differently.

- *A clear structure* – this helps to break down the reflective process (sometimes using a specific case report template or reflective model) and gives coherence to what can be an emotional and complex journey.
- *Recommendations or an action plan* – reports are often written to convince the audience of the need for change. This could be a change in the workplace, due to what you've observed, or a change in your own way of dealing with similar experiences in the future.

A reflective placement report is often the final output of a longer learning process which might involve:

1. a reflective diary or journal written during the placement
2. research and analysis of the experience, sometimes using a reflective theory or a model (such as Kolb's experiential learning cycle)
3. a reflective **report** that writes up the experience, combining evidence from your personal observations and evidence from academic theory.

Even though they weren't going to be marked, I was relieved I kept regular notes during my placement at a local theatre, or I'd have forgotten loads by the time I wrote the report a term later.

(2nd-year English Literature student)

For a more detailed example of the development of a reflective report based on a diary, analysis and the write-up process mentioned above, see pp. 92–101 in Williams, Woolliams and Spiro (2012), *Reflective writing* (in this series).

A reflective placement report may use a structure based on a reflective model or cycle, or it may include a specific section in which you need to reflect on your learning:

Report of an observation
A report of a teaching observation, following Gibb's reflective cycle (Education):

- Description of the lesson
- Feelings
- Evaluation
- Analysis
- Conclusion
- Action plan

Report of an intervention
A report on an intervention with a client (Cognitive Therapy):

- Client case history
- Assessment
- Treatment plan
- Outcomes
- Reflections
- Conclusion

One of the main challenges in a reflective report is not to write the full 'story' of your experiences. Like other forms of reports, the main purpose of a reflective report is still to *inform the audience*. In a reflective report, the evidence you use to inform the audience is usually twofold:

1. selective examples from your own experience and professional practice to illustrate your points
2. academic research or theoretical frameworks to help interpret and analyse your experiences.

Thinking of your placement experiences as 'evidence' helps you to be selective in the examples you choose, just as you would with the academic research you read.

Areas of improvement

What I feel went less well was my supervision of the new intern. I struggled with his work ethic, which was lacking and uncooperative. I felt frustrated but I recognised that the fact he was on an unpaid internship may have contributed to his poor attitude as he was lacking extrinsic motivation (e.g. monetary reward; deCharms, 1968). However, I found it hard to relate to him as he did not share the same intrinsic motivation (e.g. interest in the business; Deci, 1971) as I did.

I wish I had been more vocal in my concerns, especially with his consistent lateness (two hours late was the norm) and his use of social media at his desk. At the time, I felt it was my responsibility to deal with his poor motivation, but on reflection I realised that I had no training in supervision of staff. As we are a small company, there is no in-house management training, but I think I should have asked colleagues for advice or mentoring. Indeed, research shows that mentoring, rather than formal training, is often the most effective way for staff to learn leadership skills (Kidd, 2009). In future, I will look for opportunities to learn informally from more experienced colleagues.

An honest assessment of initial feelings, rationalised through the lens of relevant theories. Shows integration of the two forms of evidence (theory and practice).

Selection of two short examples of poor attitude is all that is needed here. It would have been tempting to tell a longer narrative of the intern's poor behaviour, especially as it was so annoying, but the author resisted!

Project proposals

If you are doing a longer piece of research like a dissertation, you will probably have to submit a proposal before you can get started. The proposal is a chance for you to present information on:

- ***what* you want to research** (an explanation of your topic and research questions)
- ***why* this is important** (the rationale behind your project, based on your initial background reading)
- ***how* you will research it** (a summary of your methods and a time plan which breaks down the stages of your investigation).

A *report* normally doesn't include a time plan, as the research has already been conducted and your audience cares about what you found out, not about how long it took.

However, a significant part of your *proposal* will be a project plan, which breaks your investigation into main stages and allocates an amount of time for each stage.

Your tutor will want to see that you have a realistic plan for completing your investigation in the available time.

A **report** is about the *past*: you are reporting on what you *have done*. A report is therefore mostly written in the past tense.

A **proposal** is about the *future*: you are justifying what you *will do*. It is, therefore, appropriate to write your proposal mostly in the future tense, e.g. 'This project will investigate …'; 'Focus groups will be conducted …'.

Projects and dissertations

If you are doing a dissertation in a science or social science subject and you are collecting your own data (e.g. conducting interviews, questionnaires or experiments), it is likely that your dissertation will have a report structure:

- Introduction
- Literature review
- Methods
- Results
- Discussion
- Conclusions

In a dissertation you'll be dealing with far more references than normal, so using reference managing software like Endnote or RefMan can help. It can take a little getting used to, but saves time in the long run.
(Meteorology lecturer)

Your dissertation is like an extended report. Because sections tend to be longer than those in a usual report, they may be called 'chapters' instead. The length of a dissertation means that planning is even more crucial. See 'Planning your report' in Chapter 2.

The main difference between a report and a dissertation (apart from length!) is that a dissertation often has a separate chapter for analysing the background literature – the **literature review**.

The literature review comes after the very brief introduction chapter. It is *not* an historical narrative of past research, nor a summary of everything you have read.

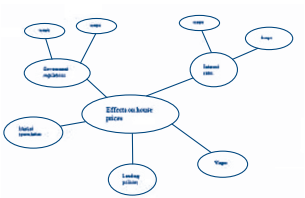
Instead, you are comparing and contrasting previous research in your field, analysing the strengths and weaknesses of these studies, and identifying what all of this tells you about your own project.

A literature review chapter usually has sub-headings to help you structure the content and to help you avoid providing a narrative account of what you have read.

Look at what themes or main issues are emerging from your background reading – use these to help group your reading together. You could use colour coding or draw spidergrams to identify the studies or areas of research that relate to each theme.

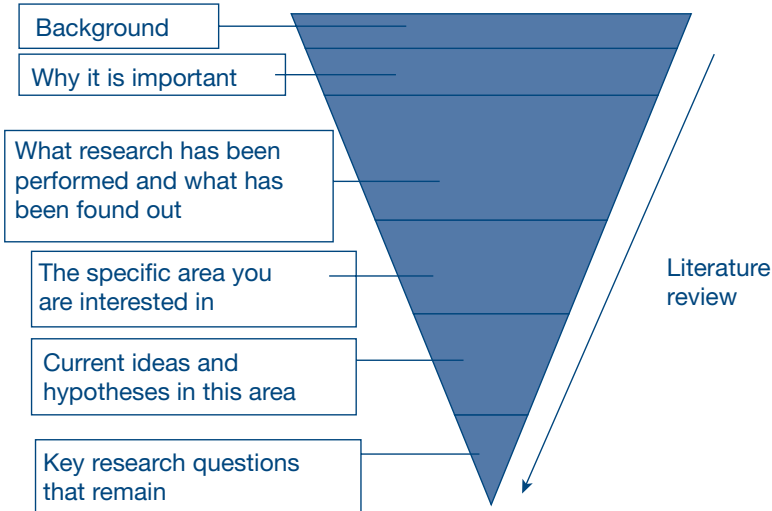
Spidergrams are good for bringing together lots of research and for creative thinking.

You're not constrained by a linear list, and you can make links and connections easily.



Once you have grouped your reading under headings, compare and contrast the studies under each heading, analysing their methods and findings, and always showing how these findings relate to your own investigation.

You can think of the literature review section of your report like a funnel. You start broadly by introducing the background and importance of your area of investigation briefly; then gradually you narrow down through the themes in the research to the ones that most closely overlap your own dissertation; and finally you pinpoint the specific question or gap in the research that you will investigate:



A main feature of reports is their use of headings to structure information effectively, and this is especially useful in your literature review section. Use sub-headings to help identify the key themes in the research and to guide your audience down the 'funnel'.

Does the colour of bell peppers make a difference to their effectiveness in reducing the risk of cardiovascular disease?

2 Literature review

2.1 Cardiovascular disease (CVD)
- 2.1.1 Carotenoids and CVD
- 2.1.2 Ascorbic acid and CVD
- 2.1.3 Flavonoids and CVD

2.2 Sweet bell peppers
- 2.2.1 Vitamins and phytochemical composition of bell peppers
- 2.2.2 Vitamins and phytochemical composition of bell peppers at different maturity stages
- 2.2.3 Colour of bell peppers and antioxidant activity

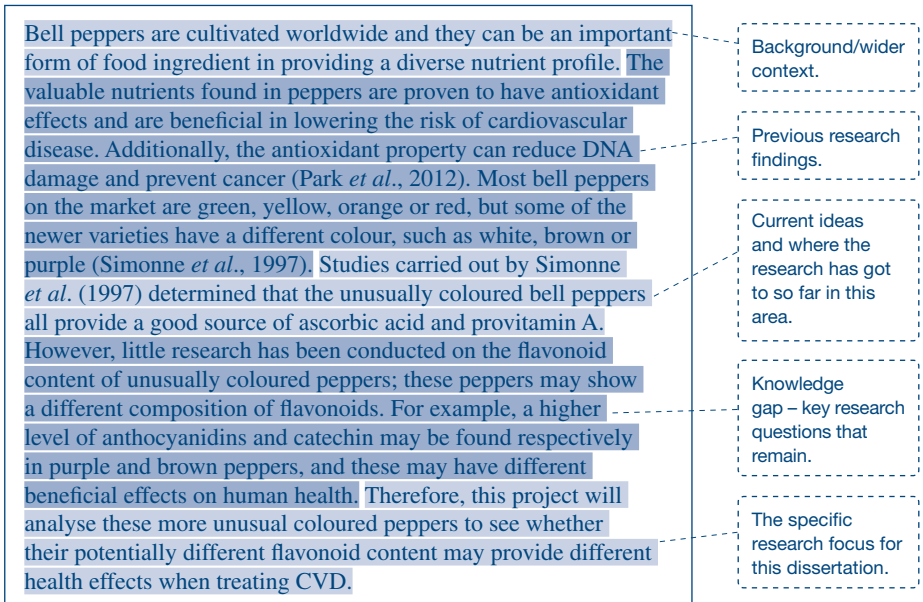
2.3 Aims and hypothesis

Starts broadly with the research showing how chemical composition of foods can have a positive impact on cardiovascular risk.

Uses the headings to lead the audience step by step through the research that's already been done in this area.

Narrows to the specific area of investigation in this dissertation.

Example of writing style in a literature review:



For more on dissertations generally, see Greetham (2014) and Williams (2019).

5 Presenting your findings

Reports are as much about *visual* communication as they are about *written* communication. Much of the meaning in a report is conveyed through its formal structure, including headings, lists and bullet points, and through the presentation of findings in tables, graphs and diagrams.

When presenting your results, you need to choose the most appropriate way to represent them so that your readers can see the key trends, patterns or themes.

Imagine you are presenting the findings for the following report:

> *Does the current university system provide good value for money for students?*

You might consider using some or all of the following methods of data presentation, depending on how appropriate they are for the findings you have.

Tables

Good for: presenting exact numbers.
Not good for: showing overall trends.

Clearly labelled with a useful descriptive heading.

Comparing so many different categories would be difficult on a single graph.

The units of the data are also clearly shown.

Table 1: Yearly expenditure for three Brookhampton students (excluding tuition fees)

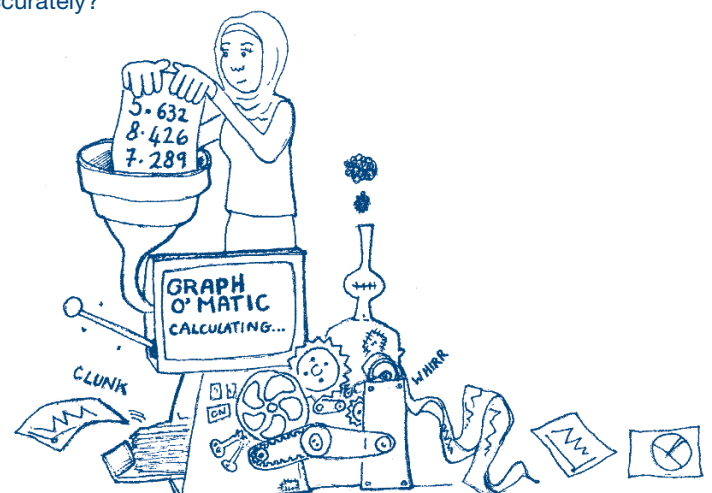
	Expenditure in £					
	Housing	Food	Personal items (clothes, phone, etc.)	Socialising	Books, computers, equipment	**TOTAL**
Student A	4,004	1,589	1,894	1,197	987	**£ 9,671**
Student B	3,569	1,300	900	937	936	**£ 7,642**
Student C	3,400	1,607	1,549	1,402	876	**£ 8,834**

We scan from top to bottom, so it is easy to skim down the table columns and compare all three students' expenditure in the same category.

In English we read horizontally from left to right, so it is easy to read across the table rows and find the breakdown of expenditure for each student, and the total expenditure.

Graphs

You may be using a program such as Microsoft Excel to draw your graphs – but remember that computers can only work with the numbers you give them, and they can't do your thinking for you. Are you using the appropriate scales and plotting the points accurately?



Line graphs

Good for: showing changes over time or how two variables interact.
Not good for: showing precise numbers.

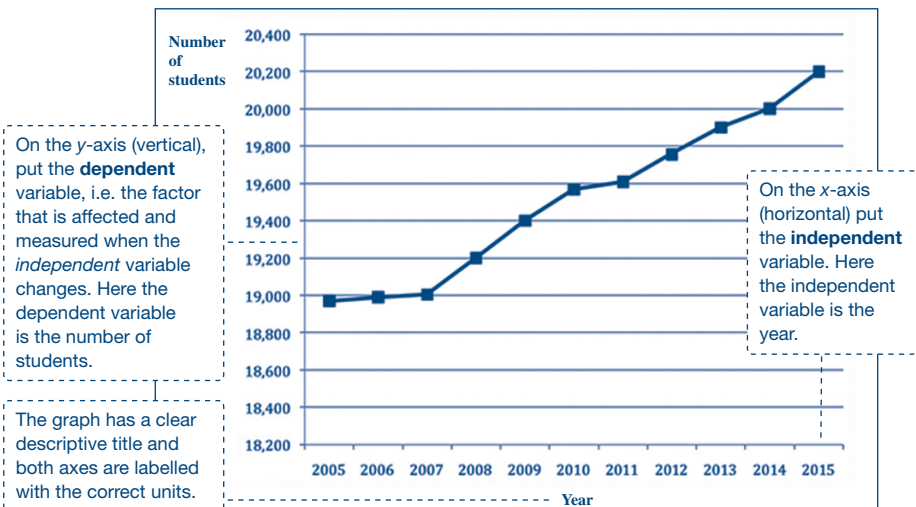


Figure 1: Total number of students attending Brookhampton University 2005–2015

Bar charts

Good for: showing comparisons between the total amounts in different categories.
Not good for: showing complex multiple comparisons on a single graph.

Two bars in each category should really be the limit, as further bars make the chart too complex and it becomes hard to compare across categories.

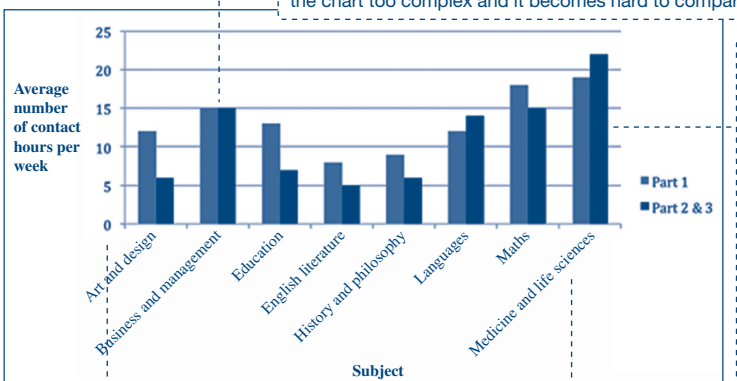


Figure 2: Average number of contact hours a week per subject at Brookhampton University

The categories here are **discontinuous** (i.e. they are discrete and don't follow on from each other) so the bars have a space between them to show this.

If the data were **continuous** (e.g. height: 1.70–1.74m, 1.75–1.79m and 1.80–1.84m), the bars would be next to each other to show this.

Frequency (number) in each category goes on the vertical axis.

Categories go along the horizontal axis.

Pie charts

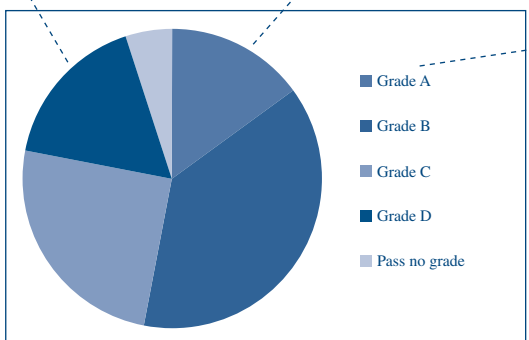
Good for: showing large-scale relative proportions.

Not good for: showing the size of the whole 'cake', total figures, or fine differences in proportions.

Not too many slices. With more than 5 or 6 slices, the chart becomes difficult for the reader to interpret.

Large, distinct slices. If the slices are too small or too close to each other in size, it is hard to distinguish between them – in that case, consider using a table or bar chart instead.

A pie chart can't show the *total* number of students – we don't know if there are 90 or 90,000 students! So if you are using pie charts to show proportions of budgets, remember that the reader also needs to know the overall budget total.



A clear key shows what each slice represents.

Pie charts usually need to be in colour – if they are just shades of grey, it is hard to see the difference between slices and to read the key.

Figure 3: Proportion of final degree classifications for Brookhampton students graduating in 2015

Photographs

Good for: illustrating what things look like in 'real life'.
Not good for: detailed and precise technical representations.

Although photos are aesthetically pleasing, it may sometimes be difficult to see what is being represented and why. The angle of the shot, the sharpness of focus, the light source and the quality of the photo's reproduction may all distort or obscure what you are trying to show. If you are trying to show detail, a simple line drawing may be better.

If you have collected many photographs, for example from fieldwork, it may be more appropriate to include a relevant (clearly titled and labelled) selection in an appendix.

When including any photograph, ask yourself what purpose it has in the report and whether your report would be affected if it wasn't there.
(Geography and Environmental Science lecturer)

Diagrams

Good for: representing complex processes or detailed information in visual form.
Not good for: showing 'real life' three-dimensional perspectives.

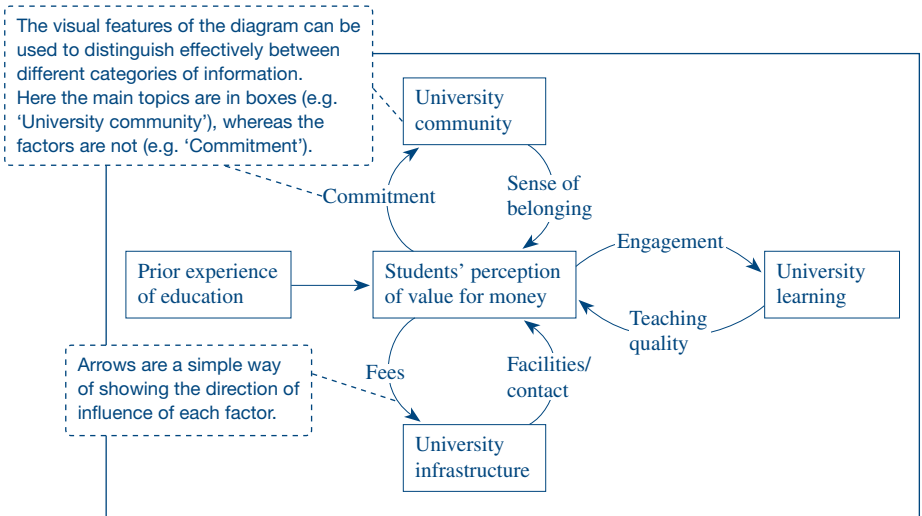


Figure 4: Factors influencing students' perception of the value for money of university

Complex relationships such as those shown above would take many paragraphs to describe, whereas a diagram and appropriate labels can convey these relationships in only a few words.

If a diagram is worth including, then it's worth going large!
(Graphic designer and tattoo artist)

Diagrams are only as effective as their labels – you need to tell the reader what each part means or shows, as it may not always be immediately obvious.

Diagrams that are too small or poorly reproduced will frustrate your reader. Reports are professional documents, so the visual information needs to be presented to a high standard. Make use of the services and expertise at your university (e.g. IT services, lab technicians, librarians, graphic designers) to help you present the information in the form you want.

Maps and plans

Good for: showing spatial representations and geographical locations.
Not good for: showing 'real life' three-dimensional perspectives.

Every map or plan should have a scale marked in metric units at the bottom. Maps conventionally represent north as the top of the page and have a compass arrow showing this.

If your plan or map uses symbols or shading to represent features in the landscape, you need to include a key explaining what these symbols show. It is good practice to incorporate your key within the map (usually over to one side) rather than having it separate from, or underneath, your map. This prevents the key from becoming lost or disconnected from your map when you format your report.

Interviews and observations

When presenting qualitative data gained through interviews or observations, you need a systematic way of sorting through all the words you have collected – usually this is done by grouping similar ideas into themes.

For more detail of this method, see Thomas G (2017a) *Doing Research* in this series.

Once you have identified your main themes and grouped your findings under these themes, you need to present them in your report in tables or as quotations.

Table 2: What do you think constitutes 'value for money' when it comes to your university experience?

Theme	Response	Interviewee
Availability of staff	'It's no good my tutor only being available for one hour a week – they should provide a better service.'	Interviewee no. 2
	'My dissertation tutor was really helpful to start with, then he went on research leave – we were abandoned with no explanation.'	Interviewee no. 5
	'I understand staff are busy, but my lecturer makes time to go through our feedback. She treats us like individuals.'	Interviewee no. 6
Sense of belonging	'I commute in from home – I feel like I'm paying full price but only getting half the experience.'	Interviewee no. 5
	'It is the best experience – where else would I get the chance to do so much and meet so many people – I don't want to leave!'	Interviewee no. 4

Tables are useful for comparing responses to a question at a glance without having to write a long description of the reply from each interviewee.

You can include short quotations in the table as evidence of the responses under each theme.

Organise the table thematically.

For more in-depth analysis you may wish to select one or two longer quotations as typical examples.

Students from Arts and Humanities subjects generally felt their fees were not directly funding their course:

> It doesn't take much to buy a few books for an English class. I think our fees just subsidise the expensive equipment for science students. (Interviewee no. 3)

As shown by interviewee 3, students are more alert to ideas of fairness in how universities allocate their budgets.

These longer quotations are often indented in the text or placed in a text box to highlight them in the body of the report.

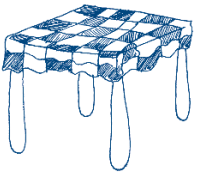
Be sure to analyse each quotation you include.

Labelling your tables and figures

Tables and figures are labelled separately and consecutively in the order in which they appear in the text:

Table 1
Figure 1
Figure 2
Figure 3
Figure 4
Table 2

The label for a table goes on top (a table cloth goes on top of a table) and the label for a figure goes below (a figure needs something to stand on).



Include a brief descriptive title explaining what the table or figure shows. You don't need to write 'A graph showing …' or 'A diagram showing …' – readers can see that.

The title needs to be meaningful and precise. Compare the following titles:

Figure 5: Student costs

and

Figure 5: Average student living costs, 2005–2015

When you refer to the table or figure in your text, put the relevant table or figure number in brackets:

Student living costs increased at a steady rate in line with inflation, until recently when high rent prices have caused a sharp increase in total costs (see Figure 5).

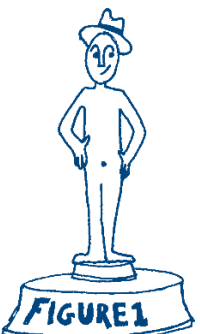


Illustration from Robbins (2009), *Science study skills*

It is important to refer to all your tables and figures in the body of your report – otherwise there is no point in them being there!

If you include in your report data, tables, diagrams, graphs or photographs taken from other sources, you need to show where you got them from by **referencing** them.

There is far greater emphasis placed on accurate referencing in reports at university, compared to reports in the workplace. I have to remind my students who come from professional backgrounds that they must show where every idea, statistic, diagram etc. has come from. They are used to presenting information and relying on the authority of their company, so academic referencing is entirely new to them – but after some feedback, they get used to the conventions.

(Business and Management lecturer)

One of the main things tutors look out for in references is **consistency** in style and formatting, so find a good guide for the referencing style that your department uses and stick to it – don't mix and match!

The first place to look for referencing guidance is **your course handbook**, as that should contain information on the referencing style your department wants you to use.

If your department doesn't provide a referencing guide, you can also find comprehensive guidance in Williams and Davis (2017), *Referencing and understanding plagiarism* (in this series) or in the *Citing references* guide from the University of Reading (2017a): http://libguides.reading.ac.uk/citing-references.

Referencing unusual sources

Reports often draw on a wider variety of sources than most other forms of academic writing, so it is useful to understand the basic principles of referencing so that you can apply them to **any type of source in any referencing style**.

You need to gather only four pieces of information to be able to reference any source using any referencing style. These are:

1 Author
2 Date of publication
3 Title of source
4 Publication details

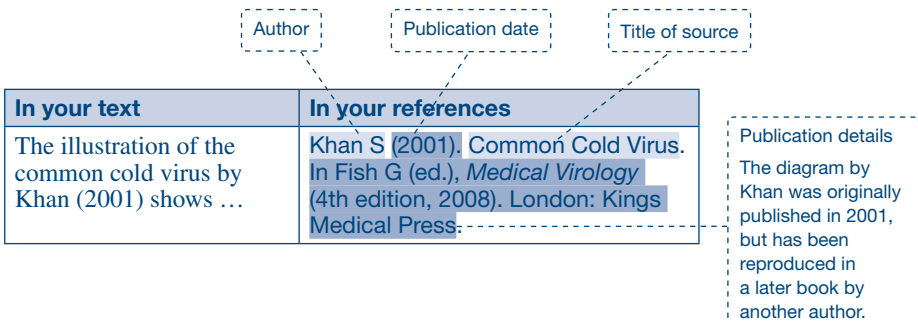
It's usually the publication details that cause the most concern, as they differ because of the wide range of publication methods available (book, journal, website, video, newspaper, etc.).

Your referencing guide will show you which publication details you need for each type of source and the way to format these. However, all referencing styles have two parts:

- an in-text **citation** in the body of the report.
- the full **reference** in the 'references' section.

The examples below use a Harvard style of referencing, and you can see how they adhere to the main principles of giving the name, date, title and publication details. You would just need to reformat these basic elements if you were using a different style.

Images (graphs, diagrams, photographs, drawings)



You need to show who created the image and when, but also where you found this diagram if it was reprinted in a book or on a website.

Interviews

In your text	In your references
Dowling (2016) observed that wikis were an effective way for social workers in different offices to share information …	Dowling B (2016). *Use of wikis to create a community of practice amongst social workers.* [Interview] West Berkshire Council offices, Reading. Conducted by L Lilani. 27 October 2016.

Maps

In your text	In your references
As can be seen on the map of the Peak District (Ordnance Survey, 2017) …	Ordnance Survey (2017). *OS Explorer Map of the Peak District: Dark Peak Area.* Scale 1:25 000. Southampton: Ordnance Survey.
In Cardiff city centre, the building of the Millennium Stadium has led to urban regeneration (Google Maps, 2018).	Google Maps (2018). Cardiff City Centre: Castle Street District. No scale. http://maps.google.com/maps?q=Millennium+Stadium,+cardiff&hl=en&ll=51.479071 (accessed 23 March 2018).

6 Demonstrating critical thinking in reports

What is critical thinking?

In feedback on previous reports you may have got comments like ‘Be more critical’ or ‘Needs more critical analysis’. This may be frustrating, as comments such as these tell you what is missing, but not necessarily what **critical thinking** actually *is* or how to go about including more of it in your reports. Given this kind of feedback, it’s understandable to see ‘critical thinking’ as some mysterious, secret process that you need to access in order to gain better marks. However, thinking critically is something we do every day, not just in an academic context.

Imagine you are buying a new smartphone to replace your broken old one.

It's unlikely you'd buy the first phone you saw … unless you are a particularly impulsive shopper!

You might start by **processing** information about your old phone and what you'd liked and disliked about it, then use this to help **understand** and **analyse** your current needs for a new phone (price, style, tariffs, functionality, etc.). You might browse online and **compare** different phones, then **synthesise** the information to come to some best choices. You might then **evaluate** these choices and **apply** your criteria, so that you could pick one to buy. Finally, you might **justify** your choice to yourself (or to a friend) and feel satisfied that you'd picked the right phone for you.

Critical thinking isn't just one thing, or a single skill … it is a mindset or an outlook on life that involves the combination of multiple skills. This is often why tutors find it hard to explain what critical thinking is, because it's many things – it's all those processes involved in making a reasoned judgement, combined as in the example above. Also, critical thinking varies depending on the subject in question, so the style of evaluation and the evidence needed will be very different in Chemistry, in Marketing, or in Education.

But whatever the subject (academic or otherwise), there are some fundamental processes involved in thinking critically, as shown in this 'stairway' from Williams (2014), *Getting critical* (in this series):

Use critical thinking to develop arguments, draw conclusions, make inferences and identify implications.				**Justify**
Transfer the understanding you have gained from your critical evaluation and use in response to questions, assignments and projects.			**Apply**	
Assess the worth of an idea in terms of its relevance to your needs, the evidence on which it is based and how it relates to other pertinent ideas.		**Evaluate**		
Bring together different sources to serve an argument or idea you are constructing. Make logical connections between the different sources that help you shape and support your ideas.	**Synthesise**			
	Compare	Explore the similarities and differences between the ideas you are reading about.		
	Analyse	Examine how these key components fit together and relate to each other.		
Start here ☺	**Understand**	Comprehend the key points, assumptions, arguments and evidence presented.		
Process	Take in the information, i.e. what you have read, heard, seen or done.			

Source: 'Critical Thinking', © 2013 The Open University. Used with permission. The OU text has been drawn as a stairway. Reproduced from *Getting critical* (2014) in this series with kind permission from Kate Williams.

This may seem like a lot of steps to take in. However, all these steps contribute to an outlook on life that can be summed up as a '**questioning mindset**'. Essentially, therefore, critical thinking means not accepting anything without first questioning it and considering alternatives.

Critical thinking in reports

But what does this have to do with writing reports?

One way of looking at it is that critical thinking is an investigative process, and a report is a structured account of an investigation, with each section of the report doing a different job in that process. So, to a certain extent, the sections of a report map on to the steps involved in critical thinking:

Step in critical thinking staircase	Section in a report	Critical thinking step as demonstrated in report section
Process Understand	Introduction	**Processing** the report brief and **understanding** the importance of the investigation (why it is needed).
Analyse Compare	Literature review / Extended introduction	**Analysing** the previous research on this topic and **comparing** research findings to identify the similarities and differences between them, in order to show how your investigation will contribute to this topic.
Synthesise	Hypothesis and Methods	**Synthesising** the previous research in order to identify your own research question and hypothesis. Drawing on the analysis and synthesis of previous research methods to justify your choice of methods.
Evaluate	Results	**Evaluating** your data in order to identify the trends and patterns in the research and to assess how (statistically) valid the findings are.
Apply	Discussion	**Applying** previous research in order to help explain your own findings and their relevance to the overall research question/topic.
Justify	Conclusion and/or Recommendations	**Justifying** your findings, and any changes or recommendations you suggest based on those findings.

You can see the progress up the critical thinking staircase throughout the sections of a report. However, this division is slightly artificial as the stages involved in critical thinking are interwoven, and often happen together as part of an overall questioning mindset. Your tutors would certainly hope that you are using the full range of the critical thinking processes in all sections of your report. Even so, the table above is useful in showing how different sections of a report may each have a different balance, and may favour different parts of the critical thinking process more than others, depending on the job the section needs to do.

Demonstrating critical thinking

As critical thinking is based on a questioning mindset, asking yourself questions about what you are finding out can make it easier to think critically as you write your report.

Sections of report	Questions to ask yourself	Ways to demonstrate critical thinking
Introduction / Literature review	• What are the major themes in the literature? • What do researchers in this area agree on and why? • What do researchers in this area disagree on and why? • What are the strengths and weaknesses of the research in this area? • Are the conclusions of the research justified by the findings? • What are the barriers to progress in the field? • What don't we know yet – why not? • How will my investigation contribute to the knowledge in this field? • Why is my investigation important?	A good choice of sub-headings or grouping of previous research demonstrates the clarity of your understanding of the literature. The structure you choose shows your thought processes and how you have conceptualised the overall field of research. Comparing and contrasting the literature shows that you are making connections and thinking about the bigger picture, not just describing the individual research studies. Interrogating the methods of (some) of the relevant previous research shows that you have a questioning mindset and are not just accepting what you read at face value.

Methods	• Why have I selected these methods? • Are the methods fit for purpose – why? • Will the methods test and find the information I need to answer my report brief or research questions? • Are there alternative methods I could use? • Why have I chosen not to use these alternative methods?	Thinking critically doesn't just mean 'criticising'. Explaining why you may *agree with*, or have *selected*, certain methods is as important as identifying weaknesses. Being able to synthesise, adapt or develop certain methods shows that you can improve upon what has been done before (where appropriate) to ensure that the methods are fit for *your* purpose.
Results	• Do I understand how I am analysing my data (e.g. the statistical analysis)? • How do the data I have gathered help me answer my research questions? • What patterns or trends do the data show? • What do the trends or patterns in the data mean? • Are the results robust? If so, why; if not, why not?	Truly understanding the means by which you process and evaluate your data will shine through, and means that you can interpret your data with confidence. Don't leave the audience to do all the work – identify what they should be seeing in the data, and why.

Discussion	• What have I found out? • What do I think about what I have found out? • What is making me think this? (e.g. based on previous research) • Do my findings confirm or contradict the previous research? Why? • Are there any limitations to my investigation? • To what extent can I draw sound conclusions or generalise from my findings?	Linking your findings back to previous research will show that you can make connections and apply what you know to interpret your own results. Don't worry if your findings don't show what you were expecting – this can be a great opportunity to demonstrate critical thinking. Making reasoned and well-justified 'guesses' as to why you got different results shows original thinking and an ability to apply research from other contexts to new situations. Being honest about the limitations of your own research shows that you can evaluate your own work objectively.

Conclusion / Recommendations	• What is the bigger picture? What are the wider implications of these findings for the area? • So what will we do as a result of these findings? Are there any changes or developments we should make? Why? • What further investigations may need to be done? Why, and what might these show?	Looking at the practical applications of your findings and what they might mean 'in the real world' shows that you are considering the bigger picture. Making well-justified recommendations shows a good problem-solving ability and an awareness of how research can lead to real changes.

Critical thinking in the discussion

Although you will be demonstrating critical thinking *throughout* your report, if you look at the breakdown of marking criteria you will see that the discussion section often carries a lot of marks. It's weighted heavily because it is a section where there is greater opportunity to bring together the critical analysis you have been doing throughout the report, and to apply it in order to interpret your own findings.

I dislike the 'black box' mentality where students in the lab just use a machine or statistics package without knowing what goes on inside it ... if you don't understand the process, you're just accepting the results you get out the other end. A genuine critical thinker doesn't do this.

(Food Science lecturer)

It's worth taking a closer look at how asking questions can help you to structure your critical thinking for the discussion section.

Critical thinking process

Questions to ask yourself	Thought process
What have I found out?	I plotted the London head offices of 5 finance firms and 5 real estate firms on a map – the finance firms were clustered around the Square Mile, but there was more diversity in the location of real estate firms.
What do I think about this?	This is surprising – I was expecting that Advanced Producer Services like real estate firms would be in the same locations as the major financial clients to whom they were providing services.
What is making me think this?	The background literature stresses the benefits of clustering and agglomeration (Sassen, 1991; Castells, 1996) – because of the ability to share information, face-to-face networking, awareness of competition and clients, etc.
What conclusions can I draw from this?	However, the literature also suggests a process of decentralisation and geographic dispersal enabled by better technology (O'Brien, 1992; Castells, 1996; Graham, 2002). Usually this is explained as being distinct and unconnected to agglomeration, but maybe my findings can be explained by a combination of both processes.

Paragraph in discussion section

Comparing the findings to previous research.

Identifying where the findings may contradict previous research.

All five of the major financial firms looked at in this research have their London head offices located within the Square Mile. This confirms the pattern of clustering of similar businesses within Global Cities identified by Sassen (1991) and Castells (1996). In contrast, only one of the five major real estate firms looked at in this research have a head office in the Square Mile. The head offices of the other four firms are more widely located throughout central London. This seems to contradict the expectation that Advanced Producer Services agglomerate around the financial firms that are their main clients (Sassen, 1991; Castells, 1996). A possible explanation may be offered by the decentralisation of such real estate firms outside of the most expensive central locations. In the literature, decentralisation and agglomeration are usually discussed as distinct processes (O'Brien, 1992; Castells, 1996; Graham, 2002). However, the pattern of location of these financial and real estate firms in the City of London suggests that the effects of agglomeration and decentralisation may occur in conjunction with each other, with some businesses clustering and others decentralising, depending on needs.

Offering a possible explanation for the contradiction, based on a reasoned **application** of other literature.

Taking the critical analysis further by **synthesising** the literature to come up with a new explanation for the finding.

The best advice concerning critical thinking that I have is to be patient – it takes practice and time to learn. Look at your feedback and work on one aspect at a time.
(Education lecturer)

7 Writing concisely

Reports are informative and they have a purpose, so if the writing is unclear or irrelevant, the effectiveness of the information is lost and the purpose is not achieved.

This is especially true in a work environment where clear, incisive communication is a powerful tool for persuasion and achieving change. A poorly written report will be ignored or dismissed – both you and your message will lose authority. At university, a poorly written report will also lose you marks!

Write concisely – it's easy to say, but how can you achieve this?

Give yourself a target

We tend to be more focused when we have a target to meet. So as well as keeping in mind the overall word count for your report, it's also a good idea to set yourself mini-word counts for each section in the planning stage, especially if you have a habit of writing a lot. Realising you need to trim 100 words from the introduction is far less disheartening than having to cut 1,500 words at the end!

Section of report	Relative length	Rough word limits, based on 2000 words overall
Introduction (if including background literature)	One of the longest sections – similar to the discussion	500 words
Methods	Medium-length – shorter than the discussion	400 words
Results	One of the shorter sections	300 words
Discussion	One of the longest sections – similar to the introduction	600 words
Conclusion	Shortest section	200 words
Overall total		**2000 words**

Health warning: These word counts are only rough examples – they are not to be taken as an absolute rule. Follow the guidance of your tutors and think about the needs of your audience when setting your own section word limits.

Write to express, not to impress!

The best academic writing explains complex ideas in a clear and straightforward way.

You need to use appropriate words – don't try to make your writing appear more advanced by substituting longer, more difficult words when simple ones work best.

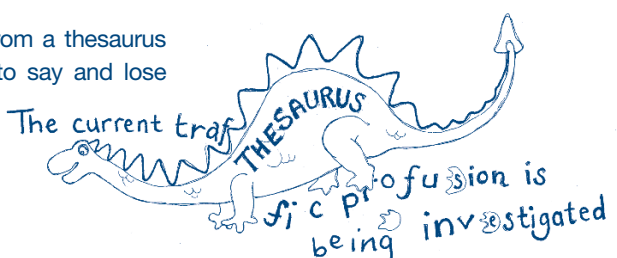
If you use a thesaurus to find more 'academic-sounding' words, this is what you might end up with …

The contemporary transportation profusion has been instigated by the Council appointing road works concomitantly as a construction enterprise is anticipated to commence.

… when what you really meant to write was this:

The current traffic congestion has been caused by the Council scheduling road works at the same time as a building project is due to start.

Selecting alternative words from a thesaurus can distort what you mean to say and lose marks. Have confidence in your own way of expressing your ideas – this will be more genuine and direct.



Use technical terms appropriately

Each academic subject has its own technical terms and a shared vocabulary – and you need to use these **specialist terms** appropriately and accurately.

If there is a correct term, use it! Don't substitute another similar word just for the sake of variety. For example, 'IQ' and 'intelligence' don't mean the same thing.

Use the right words for your audience. If you are writing a report for sports science professionals they will understand the term 'aerobic capacity'. However, if your report is for a local running club, a more appropriate explanation might be: 'the amount of oxygen you can take in and use while exercising'.

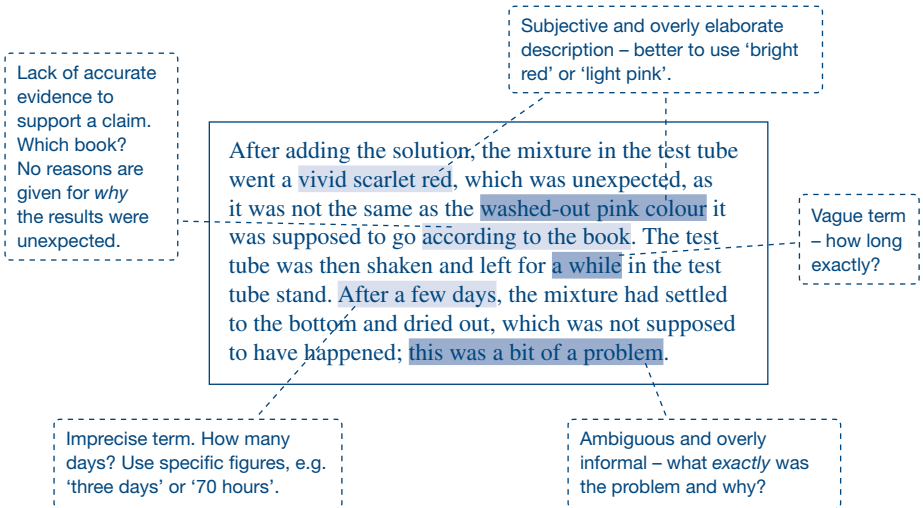
Specialist vocabulary usually has its own abbreviations and acronyms. It is good practice to use the full name the first time it appears in your report, and to give the abbreviation or acronym in brackets. For example:

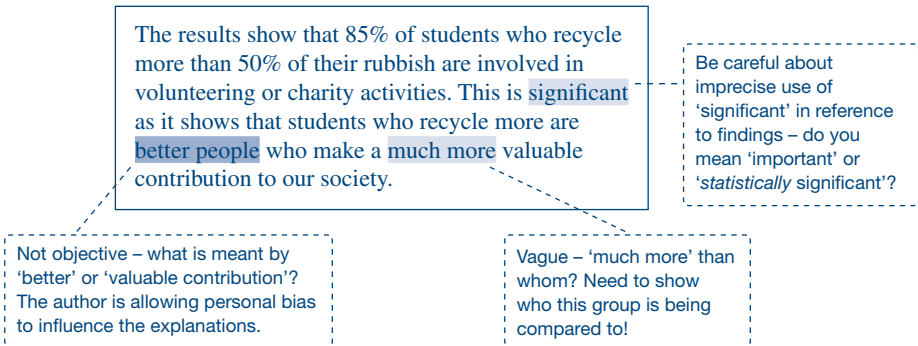
… Cognitive Behavioural Therapy (CBT) …

After that you should just use the shortened version.

Use words with accuracy and precision

The sample texts below contain many common problems:




The results show that 85% of students who recycle more than 50% of their rubbish are involved in volunteering or charity activities. This is significant as it shows that students who recycle more are better people who make a much more valuable contribution to our society.
Be careful about imprecise use of 'significant' in reference to findings – do you mean 'important' or '*statistically* significant'?
Not objective – what is meant by 'better' or 'valuable contribution'? The author is allowing personal bias to influence the explanations.
Vague – 'much more' than whom? Need to show who this group is being compared to!

Use of first person

Reports use formal academic writing, so they are usually written in the **third person** and using the **passive voice**.

Passive voice

I interviewed six marketing managers.

This is an active sentence because the subject (I) is doing the action (interviewing) to the object of the sentence (marketing managers).

However, in a formal academic report the sentence would be in the passive voice:

Six marketing managers were interviewed.

This uses the passive voice: there is no direct subject who does the action.

Similarly:

I conducted five focus groups with first-year students.

becomes:

Five focus groups with first-year students **were conducted**.

This is an artificial way of writing, as we know that investigations don't just happen on their own – someone is responsible for doing them. However, since your readers are interested in *what was done* and not in *who was doing it*, the passive voice focuses attention on the process and the evidence, and minimises the temptation to include unsupported personal opinions.

The exception is if you are writing a reflective report in which your evidence is based on your personal experiences or observations – for example, reporting on a professional placement. Then the authority of your evidence comes from your own professional viewpoint. You need to show that you have reflected and learned from these experiences, so it is appropriate to write in the first person.

For example:

> I intended the quick start to the lesson to be engaging, but I noticed that the pupils were soon becoming restless as they did not know what was coming next. In future, I need to use clear 'advance organisers' (Ausubel, 1960) to alert the class to the key parts of the lesson.

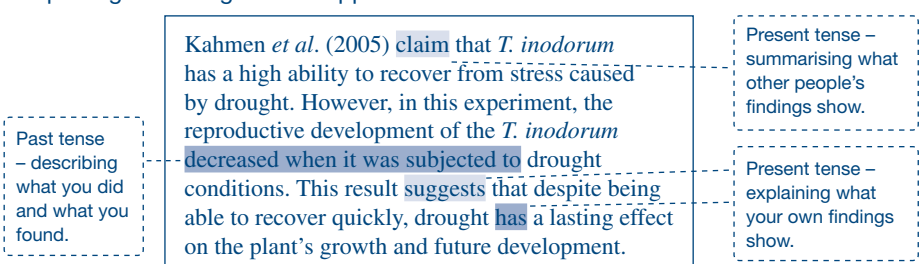
For more on reflective writing, see the section on reflective placement reports pp. 86–90 and see Williams, Woolliams and Spiro (2012), *Reflective writing* (in this series).

Use of tenses

In a report you are reporting what *has happened*, so you will be writing mostly in the past tense, especially when describing your methods.

However, there is an exception: you write in the present tense when discussing what your own and other people's findings show. This is because the explanations for your findings (and those of other people's research) are applicable *now*.

- When you are describing *what was done* and *what was found* (in your own investigation and other people's research), **use the past tense**, as you are reporting what has happened.
- When you are explaining *what the findings show* and *what can be concluded from them* (in your own and other people's research), **use the present tense**, as you are reporting knowledge that is applicable now.



Cut unnecessary words

Planning each section of your report before writing it will help you stay on track. However, you can only really make your report concise at the redrafting stage, once you have a more distanced, objective view … so leave yourself enough time for a ruthless redraft!

Each section of a report has its own pitfalls that encourage waffling, so ask yourself:

- **Introduction and discussion**: Is all the literature I refer to specifically relevant to my investigation?
- **Methods**: Have I described my investigation in *enough* detail for someone to replicate it, but not in *too much* detail?
- **Results**: Are all the findings I describe relevant to answering my brief, aims or research questions?

Tighten up your writing by removing unnecessary words or phrases. Print your report out on paper and go through it with a highlighter pen, marking any words that could be cut; then read it again to ensure that it

The most common section that students waffle in is the Results, where there's a temptation to explain every single data point rather than trends or relationships.

(Engage in research: www.engageinresearch.ac.uk)

still makes sense without those additional words. Could you express something using one word instead of several?

Here are some long-winded constructions commonly used in reports, and their more direct alternatives:

Introductions and literature reviews	
Wordy phrases	*Shorter versions*
The focus of this project is to study the effects of reduced rainfall on local wheat production.	This project examines how reduced rainfall affects local wheat production.
It can be seen in the literature that … After reading the research, it can be concluded that … The themes across the literature demonstrate that …	Research shows that …
Dr Thomas Keenan and Dr Subhadra Evans in their major work *An Introduction to Child Development* (2012) argue that …	Keenan and Evans (2012) argue that …
A large number of researchers make the claim that … It is argued by a lot of researchers that … There is a consensus amongst researchers that …	Many researchers argue that … Researchers agree that …

Methods	
Wordy phrases	*Shorter versions*
Participants were not intended to be representative of wider populations …	Participants were not representative …
The method that is most effective is found to be …	The most effective method is …
The questions asked by the interviewer were open-ended …	The interviewer asked open-ended questions …
Results	
Wordy phrases	*Shorter versions*
The results of the experiment are quite clearly shown to be …	The results show …
Key themes across participants were resoundingly similar …	Participants identified similar themes …
It can be deduced that populations are increasing … It is evident that populations are increasing …	Populations are increasing …
The analysis revealed a group of organisms that were fibrous in nature and that also had multiple cells.	Analysis revealed a group of fibrous multicellular organisms.

Discussion	
Wordy phrases	*Shorter versions*
Due to the fact that … Considering the fact that … In light of the fact that … The reason for … This can be explained by the fact that …	Because … Since … Given that … As …
It is possible that profits will rise … It may be probable that profits will rise … There is potential evidence to indicate profits will rise …	Profits could rise … Profits might rise … Profits may rise …
The results, which show an increase in nitrogen, can be interpreted as being due to …	The increase in nitrogen may be due to …
It is somewhat surprising that these findings have been found to contradict the results in the previous literature …	Surprisingly, these findings contradict previous research …
Conclusion / recommendations	
Wordy phrases	*Shorter versions*
Overall, the most important thing to conclude is … It is important to point out that …	An important conclusion is …
The business should endeavour to utilise …	The business should use …

Wordy phrases	*Shorter versions*
In the event that … Under circumstances in which …	If …
It is necessary that changes are made… It cannot be avoided that changes are made…	Changes should be made … Changes must be made …
There is a necessity for the company that it cuts down on …	The company should reduce …

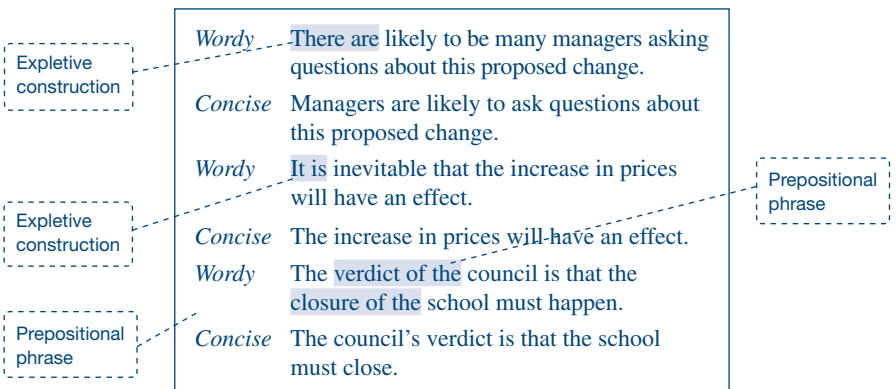
What words would you cut from this extract?

> However, unfortunately with the upturn in prices, fewer arable producers will be tempted to venture towards any sort of collaborative farming other than 'buying groups'. A sudden downturn in prices may in fact force farmers into some kind of collaborative farming agreement. Although actually by the time this comes about it may be too little, too late for many farm businesses.

It is good to check for unnecessary words at the start of sentences. People often need a 'run up' before they jump into the point of their sentence. Removing these filler phrases gets to the point more directly and more powerfully.

At the start of sentences:

- Watch out for **expletive constructions** (no, this doesn't mean swearing!) such as 'It is …', 'There is …' or 'There are …' as these delay and obscure the main subject and action of the verb.
- Also beware **prepositional phrases** such as those including 'of', 'from' or 'after', as these can make a sentence hard to follow.



Check and proofread

A report is a professional document produced for an audience, so it needs to be accurate and well presented.

When planning your report, leave enough time at the end for final checks and proofreading.

Proofreading tips

- Leave your report for at least a day before reading it through for the final time.
- Print it out on paper – you can spot mistakes more easily on paper than on a screen.
- Read your report aloud – this forces you to read what you *actually* wrote, not what you *thought* you wrote.
- Read through once for content; then read through again to spot minor errors and spelling mistakes.
- Make sure all the texts you have referred to are included in your list of references.
- Check (and double-check) any calculations, statistics, graphs, etc.

Report writing checklist

Have you:	Check ✔
• answered the brief?	
• targeted your report at your audience and addressed their purpose in wanting the report written?	
• identified what you needed to find out in order to answer your brief?	
• introduced your investigation and placed it in the context of previous research?	
• ensured that all of the previous research mentioned is relevant to your investigation?	
• described the methods for conducting your investigation fully, so that someone else could carry it out (if appropriate for your type of report)?	
• presented your results in the most appropriate format?	
• described in words what your results show?	
• made sure that the results you present are all relevant in answering your brief?	
• discussed your findings, offering explanations based on the previous research you have read?	

• summed up your key findings in your conclusion?	
• made clear recommendations, if appropriate?	
• written an abstract or executive summary summing up your whole report, if the brief requires it?	
• compiled your list of references?	
• checked that all of the texts you refer to are included in your list of references?	
• edited and proofread your report to ensure that it is concise and accurate?	
• checked any calculations or statistics?	
• checked that all figures, diagrams, tables, photos and graphs are correctly labelled and are referred to in the body of your report?	
• put any additional material in appendices, and labelled the appendices and referred to them in the body of your report?	
• checked that all headings and formatting are accurate and consistent?	
• created a contents page and checked that it is accurate?	

8 Report writing at work

The good news is that once you have left university you'll probably never have to write an essay again! However, reports are a universal form of presenting information, so it is likely you will be writing reports in your chosen career.

The skills you develop while conducting investigations and writing reports at university are highly valued by employers:

- problem-solving
- project management
- team work
- clear, persuasive communication.

It irritates me when someone has just followed the company report template without thinking about what they're communicating.
(Director, software company)

Differences between academic and work reports

Your experience of report writing at university is good preparation, but note there are some important differences when writing reports in a work environment:

Reports at university	Reports at work
Layout and structure	
Your tutors specify the structure and the layout they want you to follow.	Many companies and public sector organisations have their own report templates. You need to follow the template, but you still need to *think* about what you are trying to communicate to your readers.
Audience and purpose	
Your main audience is your tutor. If you submit a late or a poor report, it only really affects you.	Your report may have multiple readers, some of whom may be paying your contract or taking decisions that affect the success of your employers. You have a direct responsibility to address the needs of your readers – on time and on budget!
Use of evidence	
You need to demonstrate knowledge of academic research and theories. You also need to reference these correctly, using an appropriate academic referencing style.	You still need to have evidence to support your findings. It probably won't be academic theories, but more 'practical' evidence like sales figures, company documents or feasibility studies.

Reports at university	Reports at work
Authority and expertise	
You gain the respect of your tutor by reading widely and engaging in the course. A well-written report will gain you marks.	You gain authority through your understanding of the company's and client's situations and the expertise you demonstrate. A well-written report will enable people to act on the information you supply.

Employers want graduates who can see their way through a problem, evaluate solutions and make strong recommendations. Your report is how you communicate this process and encourage people to take action based on your expertise.

If you can write good reports, you can make real changes!

A main shortcoming of my graduate employees is they present me with tables and figures in reports but they don't explain what these show; they just expect me magically to know why they are significant.

(Laser physicist)

References

Greetham B (2014). *How to write your undergraduate dissertation* (2nd edition). London: Palgrave.

Hartley P and Dawson M (2010). *Success in groupwork*. Basingstoke: Palgrave.

Marsen S (2007). *Professional writing: the complete guide for business, industry and IT* (2nd edition). Basingstoke: Palgrave.

Robbins S (2009). *Science study skills*. Basingstoke: Palgrave.

Thomas G (2017a). *Doing research* (2nd edition). London: Palgrave.

Thomas G (2017b). *How to do your research project: a guide for students in education and applied social sciences* (3rd edition). London: SAGE.

University of Reading (2016). *Effective group work*. Available at http://libguides.reading.ac.uk/groups/home (accessed 20 December 2017).

University of Reading (2017a). *Citing references*. Available at: http://libguides.reading.ac.uk/citing-references (accessed 20 December 2017).

University of Reading (2017b). *Features of good reports*. Available at http://libguides.reading.ac.uk/reports/features (accessed 20 December 2017).

University of Reading (2017c). *Structuring your report*. Available at http://libguides.reading.ac.uk/reports/structuring (accessed 20 December 2017).

Williams K (2014). *Getting critical* (2nd edition). London: Palgrave.

Williams K (2019). *Planning your dissertation* (2nd edition). London: Palgrave.

Williams K and Davis M (2017). *Referencing and understanding plagiarism* (2nd edition). London: Palgrave.

Williams K, Woolliams M and Spiro J (2012). *Reflective writing*. London: Palgrave.

Useful sources

Manchester Metropolitan University and LearnHigher (2008). *Analyse this!!!* Available at www.learnhigher.ac.uk/analysethis/index.html (accessed 03 June 2018).

University of Kent (2018). *ASK: assignment survival kit*. Available at www.kent.ac.uk/uelt/ai/ask/index.php (accessed 03 June 2018).

University of Manchester (2018). *Academic phrasebank*. Available at www.phrasebank.manchester.ac.uk/ (03 June 2018).

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