

Writing up a PhD

Writing up a PhD can often take place in a frenzy of activity in the last few months of your degree study, after years of hard work. But there are some steps that you can take to increase your chances of success.

Do not be daunted by the task of "writing up". Work on the text as your PhD takes shape, remember that all writers need editing, and help yourself by using these basic tips to make life easier. Read what great writers say about how to write before you start, and take their advice to heart. **There is no dark art to clear, concise work; it is mostly a result of editing, and editing again.** Above all, keep Elmore Leonard's advice in mind: "If it reads like writing...rewrite it."

Plan the structure of your thesis carefully with your supervisor. Create rough drafts as you go so that you can refine them as you become more focused on the write-up. Much of writing comprises rewriting so **be prepared to rework each chapter many times.** Even Ernest Hemingway said: "The first draft of everything is shit." Academic writing does not have to be dry. Inject some flair into your work. Read advice on writing and remember George Orwell's words in *Why I Write*: **"Never use the passive where you can use the active";** and Mark Twain's on adjectives: **"When you catch an adjective, kill it. No, I don't mean utterly, but kill most of them--then the rest will be valuable."** If you prefer, Stephen King said: **"The road to hell is paved with adverbs. Kill most of them."**

Do not write up in chronological order. Work on each chapter while it is fresh in your mind or pertinent to what you are doing at that moment, but **come back to it all later and work it up into a consistent, coherent piece, restructuring sections where necessary.**

Think carefully about your writing. Write your first draft, leave it and then come back to it with a critical eye. Look objectively at the writing and read it closely for style and sense. Look out for common errors such as dangling modifiers, subject-verb disagreement and inconsistency. If you are too involved with the text to be able to take a step back and do this, then ask a friend or colleague to read it with a critical eye. Remember Hemingway's advice: "Prose is architecture, not interior decoration." Clarity is key.

Most universities use a preferred style of references. Make sure you know what this is and stick to it. One of the most common errors in academic writing is to cite papers in the text that do not then appear in the bibliography. All references in your thesis need to be cross-checked with the bibliography before submission. Using a database during your research can save a great deal of time in the writing-up process. Helpful software includes EndNote or Paperpile. Managing your bibliography from day one may seem obsessive but it will save you a great deal of time and stress by the end of the PhD process.

Use a house style. Professional publications such as Times Higher Education use a house style guide to ensure consistency in spelling. For example, do not use both -ise spellings and -ize spellings, stick to British spelling and be consistent when referring to organisations or bodies. Because dictionaries vary in their use of hyphenation, use one dictionary and stick to it throughout the writing process. If you consult the New Oxford Dictionary for Writers and Editors, you will note the extraordinary number of words with alternative spellings. It can also be a very useful guide to preferred spellings, use of italicisation and foreign phrases. Take care when quoting from other sources. Ensure you note whether the italic emphasis is in the original and take careful notes when you are collecting quotes for your thesis. Transcribe them accurately to save work later and keep original spellings (even if they differ from your chosen style) to ensure fidelity to your

source.

Think about plagiarism. If you are quoting from works, quote from them accurately and paraphrase where necessary for your argument. This is where careful note-taking and use of references is invaluable and will help you to avoid even inadvertently plagiarising another work.

Remember that your thesis is your chance to present your work in the best possible light. Consider your opening paragraphs, entice your reader with your writing and above all be clear about your hypothesis and your conclusion. Append material where it adds value but not where it merely bulks out your work. Consider your reader at all times. This is your chance to showcase your work.

If you stick to these simple rules, your writing will be clear and jargon-free.

Above all, take to heart Orwell's advice: "Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent."

HOW I WROTE A PHD THESIS IN 3 MONTHS

BY JAMES HAYTON 144 COMMENTS

Before reading this post please note: it took three and a half years of full-time research to gather the data for my PhD thesis; the three months refers only to the writing, which I did quickly at the end. I do not claim that everybody can write that fast, and certainly if you have not done the research it will be impossible. You probably won't write as fast as I did, but you might gain some useful insights from the way I approached it.

After almost 3 years, I was on the verge of quitting my PhD in the summer of 2006. I had nowhere near enough results, the equipment I was using didn't work most of the time, and I could barely summon the motivation to get up in the morning. So how did I turn things around, get the results I needed and write my thesis in 3 months?

1. Dealing with stress

After a near-breakdown, I started taking walks around the campus when I faced a problem in my research or found myself getting stressed.

I took the time to think about what I needed to do and get myself in the right frame of mind to come back and deal with the problem.

Previously I would have found myself killing time on the internet just to get through to the end of the day. **This one change in habit probably saved my PhD.**

2. Limiting the time available

Though my productivity increased once I figured out how to deal with stress, I was still doing experiments well into my fourth year.

I had a final submission date (at the end of my 4th year), but my research was still a bit chaotic. It wasn't focused on finishing.

My supervisor (the brilliant Professor Moriarty) then told me that I would no longer be allowed into the lab after the end of March 2007, and that **I would have to write whatever I had.**

3. Adapting and acting decisively

Because of the limited time, I had to make some tough decisions. Anything I did, I would either have to finish or let go. There would be some loose ends, but that was OK as long as I tied up others.

I had to decide not to do certain things, and focus with energy and determination on others.

Still, though, the thesis would be a little thin. So I took on a side project based on another student's research, which could produce some results quickly.

This side project produced the most interesting result of my scientific career.

4. Finishing research before writing

By the time I stopped doing experiments, I knew I had enough for a PhD. Not the best PhD ever, and not world-changing, but with two publications and enough data for another, I felt it was good enough.

Because I wasn't allowed back in the lab, I just had to focus on writing. The hard part was behind me. The results weren't going to change, so it was just a matter of making sure I was productive when writing.

It is much, much easier to write when you know the raw material isn't going to change.

5. Preparation

I decided to work at home, not at the office, because there would be fewer distractions.

I got rid of the TV, and had no internet connection on my computer. **The lack of internet meant I had to gather all the papers I would need beforehand, forcing me to think about what I would need.**

I also set up a dedicated space (2 large desks joined together and a very comfortable chair, next to a large window for plenty of natural light), just for thesis writing.

6. Targets and consistency

I set myself a target of 3 months, broken down into targets for each chapter. This would give me about 3 months in reserve before the final absolute deadline.

I had a daily **minimum target of 500 words**, which I knew I could meet even on the least productive days.

This meant that because I smashed the target most days, I finished every day feeling good about my progress, which in turn meant **I started the next day feeling confident.**

7. Routine

The two most important parts of the day are the beginning and end. **It's important to build momentum early, and have a routine for ending the day too.**

At the end of each day **I always left myself something easy to do to get started with the next day, so I woke up knowing what I was going to do.**

I also tidied the desk at the end of every day, which also helped close the day mentally and stopped my brain going over and over the thesis at night.

8. Applying ruthless standards to what I included

Whether it was the lit review, or my own work, I cut anything sub-standard.

I focused only on the very best literature, saving myself a huge amount of time. It also had the result of associating my work with the very best in the field.

I only wrote about what I knew about, which made the thesis shorter, faster and easier to write, and of higher quality than if I had included everything whether I understood it or not.

9. Taking time over details that matter

I took painstaking care over the clarity of the writing, the diagrams and the overall look of the thesis.

If a diagram took 2 hours, so be it. **If I couldn't find a high-quality image in a paper to paste in, I would re-draw it myself. Why? Because it adds so much to the feel of quality running through the thesis.**

By applying obsessive focus to one detail at a time, I could make sure that I wouldn't have to do it again. This brings me to the final point...

10. One draft

I always edit as I write, with one goal only: to make sure I've expressed the idea in my head clearly on the page. **I don't move on until I feel the sentence makes sense, with no ambiguity of meaning.**

Clarity of thought is always the number one aim. But it is very difficult to come back to a piece of writing days or weeks later and sort out a mess of thought if you don't clarify your writing while the thought is still fresh in your head.

This means I was constantly re-reading and revising what I've just written, but also means that when I submitted something to my supervisor it needed very few revisions and saved months, simply by getting as close to "right" as I could the first time round.

Mastering Your Ph.D.: Writing Your Doctoral Thesis With Style
By Patricia Gosling, Bart Noordam

Last month, we offered suggestions on how to prepare for your thesis defence: Decide whether you need more research results, sketch out a plan for those experiments and for writing thesis chapters, and--importantly--get your supervisor's support for that plan. Now it's time to wrap things up in the lab and start writing.

Writing a thesis is easier said than done, of course, and you have plenty of work ahead. But like any big undertaking, writing a thesis is easier if you break it down into smaller steps.

First things first

If you haven't already made a countdown plan as described in last month's column, start with that first. Then, **before you start writing, make sure you and your supervisor agree on the table of contents.** This might seem obvious, but we have seen too many students start working on chapters only to have those chapters tossed out later.

Cut the problem down to size

Once you've decided on a table of contents, it's time to expand it into a detailed outline. Your outline will be several pages long and consist of chapter headings, subheadings, figure and table titles, some key words, and essential comments. Your outline will keep you on track and provide you with a framework for the text. It also forces you to **break up the writing into manageable pieces.**

Determine the format

Your department or university may have a standard format for your thesis. If so, there's probably a standard template you should use. If not, save yourself frustration and time by copying the format from a thesis that appeals to you. Make sure the format or template is easy to use. Once you've sent your thesis to your committee for review, you may consider upgrading your layout. For now, factor the format into your plan, but don't make it your primary concern. While we're on the subject of format, be sure to use the proper citation format for your list of references. This list can run into the hundreds, so use the approved format for citing literature from the very beginning--both in the text and for the list of the references at the end. Use a good citation-manager program and enter all the information for every article referenced--including titles. You won't want to have to go back and redo this if you've done it wrong!

Transform published articles into thesis chapters

Before you delve into the chapters you have to write from scratch, start by transforming your published articles and submitted manuscripts into thesis chapters. It's not just a matter of stapling your papers together and sticking them into your thesis, however. **You'll need to break the publications into pieces and weave them into a cohesive narrative, making sure the various parts fit together nicely without redundancies** or gaps in logic. When doing this, keep the following in mind:

Drastically cut back or rewrite the introduction section of each article. There is no need to repeat what you will have already explained in the general introduction and literature survey of your thesis. Don't just delete those introductions, however; parts of your manuscript intros will be useful for your thesis introduction, so paste any relevant text into the intro section of your thesis outline for later editing.

Cut the Materials and Methods section as necessary to avoid repetition with other chapters. Again, you'll probably want to paste some of the Materials and Methods text into the relevant sections in your thesis.

Include text that may have been cut from the final version of the article due to space restrictions.

Update your literature citations (see above).

If someone else wrote one of your publications (i.e., you did the experiments but a more senior person wrote the manuscript), we suggest you rewrite the bulk of the text in your own words. Even if experiments were done in collaboration, a thesis has only one author--you--and the words in it should be yours.

New material

After you've transformed your published articles into chapters, you will have to write new material for the remaining chapters. When you first start writing, it helps to begin with an easy section. This will give you confidence and get you into the writing habit. Because the methodology chapter is relatively straightforward, you might want to start with that one. If you've already written several methodology sections for your peer-reviewed articles, it won't take much time to prepare a first draft for your thesis.

Because a thesis has fewer space restrictions, you should take the opportunity to describe the details of your work that did not make it into published articles. **In a thesis, it is better to err on the side of being too detailed than to risk leaving out crucial information.** Be generous to the next generation of researchers; a detailed description of your progress and failures will save them a lot of time. Writing up that last set of experiments

Now that you have worked your way through the initial chapters and have written most of your thesis, it is time to tackle writing up your final project. You probably haven't written an article on this research yet, so you'll need to decide whether to write the article first and then transform it into a chapter or do it the other way around.

If there is stiff competition in your field, your supervisor will probably insist that you write the article first. Otherwise, we suggest that you write the chapter first, as this approach will allow you to describe your work in detail. While the thesis is out for review with your dissertation committee, you can select the appropriate parts from the chapter and transform it into an article to submit to a peer-reviewed journal.

10 Tips for a Stress-Free Thesis

Don't save data analysis to the very last minute. Plan ahead.

Confirm your table of contents with your supervisor.

Write an outline, and stick to it as you write.

Don't reinvent the wheel: Transform your published articles into thesis chapters. Create deadlines for yourself and stick to them.

Find a quiet place to write where you will be free from distractions. The lab is usually not a good place to write a thesis. Work from home or in a quiet place like the library.

Assign yourself a number of pages to write each day and stop when you are done.

This will prevent you from spending 24 hours a day at the computer, agonizing over your progress. When you've written your assigned four or five pages, then you're finished for the day. Turn off the computer and do something else.

Take plenty of breaks, and be sure to spend time with friends and family.

Get some exercise, eat well, and take care of your health.

Don't work in utter solitude. This is not the time to turn into a hermit. If other Ph.D. students in your lab or department are writing their theses at the same time, consider creating an informal support group in which you can share the stresses of

writing a thesis and have people at hand who are willing to review certain sections or even the entire manuscript.

The introduction: The final hurdle

Although it comes first, the introduction will probably be the last chapter you write. The introduction is where you need to place your work in a broader context, explaining why the research is relevant to the scientific community and (assuming it is) to society.

Start thinking about your introduction long before you start writing your thesis. During your final year--or even earlier--create a file in which you collect ideas and article clippings that could be useful for the introduction. A file of good ideas will be a big help in writing a comprehensive and elegant introduction when the pressure is on.

The summary

The summary is the one section of your thesis that is sure to be read widely. In a few pages you will have to describe the main findings of your thesis research, so **it is best to write this part after you have finished all the other chapters.** Do not try to describe all your results in the summary--you're simply summarizing the bulk of your work. Be sure to designate in the summary which chapters contain particular findings.

Safeguard your work

We shouldn't have to remind you to back up your work, but we will anyway. Keep a copy of your thesis on an external hard drive, memory stick, or some other storage device. Back up daily and keep the copy (or copies) in a safe place. For extra security, keep a copy of your work-in-progress off-site on a remote server (in the event of fire or theft). The simplest way to do this is to open a Web-based e-mail account and regularly e-mail your work to yourself. There are also companies that offer online document-storage services.

Going for gold: Writing an error-free thesis

Because a thesis is usually written under severe time constraints, it is difficult to produce one without some typos and other minor errors. Spell checkers help, but they can't catch errors in those hard-to-spell technical terms. In addition, errors of grammar and syntax are not always highlighted, and minor scientific errors can be easily overlooked. Your goal, of course, is to have as few errors as possible. We suggest you do two things to help make this a reality. First, put the manuscript aside for a short while after you've written the first draft. Once you've gained some distance from the material, read it over again with a sharp eye--not for content, but as a proofreader looking for typographical errors. Second, give a copy of your thesis to one or two trusted peers to read. Devise a creative way to reward them for every error they find (free cups of coffee or beer, or pizza, for example). This will give them an incentive to go through your thesis with a fine-toothed comb. If you can afford it, you may even consider hiring a professional copy editor to do this for you.

Most importantly, while writing your thesis, be sure to take care of yourself. Eat well, exercise, and get plenty of sleep so you're at your best when you sit down every day to write. This is the home stretch of your Ph.D., and you want to make sure you cross the finish line energized and ready for the next step.

Patricia Gosling and Bart Noordam are the authors of *Mastering Your Ph.D.: Survival and Success in the Doctoral Years and Beyond* (Springer, 2006). Gosling is a senior medical writer at Novartis Vaccines and Diagnostics in Germany and freelance science writer. Noordam is a professor of physics at the University of Amsterdam, the Netherlands, and director of a regional audit organization. He has also worked for McKinsey and Co.

Finishing your PhD thesis: 15 top tips from those in the know

Trying to complete a PhD thesis in time for the October deadline? We share some advice on getting over that final hurdle

The key to a successful PhD thesis? Write in your own voice

Kim Thomas

07.00 BST 10.45 BST

Many PhD students are now in the final throes of writing their thesis. Turning years of research into a single, coherent piece of work can be tough, so we asked for tips from supervisors and recent PhD graduates. We were inundated with tweets and emails – and @AcademiaObscura helpfully created a Storify of the tweets. Below is a selection of the best tips.

1) Make sure you meet the PhD requirements for your institution

"PhD students and their supervisors often presume things without checking. One supervisor told his student that a PhD was about 300 pages long so he wrote 300 pages. Unfortunately the supervisor had meant double-spaced, and the student had written single-spaced. Getting rid of 40,000 extra words with two weeks to go is not recommended." (Hannah Farrimond, lecturer in medical sociology, Exeter University)

2) Keep perspective

"Everyone wants their thesis to be amazing, their magnum opus. But your most important work will come later. Think of your PhD as an apprenticeship. Your peers are unlikely to read your thesis and judge you on it. **They are more likely to read any papers (articles, chapters, books) that result from it.**" (Dean D'Souza, PhD in cognitive neuroscience, Birkbeck, University of London)

3) **Write the introduction last**

"Writing the introduction and conclusion together will help to tie up the thesis together, so save it for the end." (Ashish Jaiswal, PhD in business education, University of Oxford)

4) Use apps

"Trello is a project management tool (available as a smartphone app) which allows you to create 'boards' on which to pin all of your outstanding tasks, deadlines, and ideas. It allows you to make checklists too so you know that all of your important stuff is listed and to-hand, meaning you can focus on one thing at a time. It's satisfying to move notes into the 'done' column too." (Lucy Irving, PhD in psychology, Middlesex University)

5) Address the unanswered questions

"There will always be unanswered questions – don't try to ignore or, even worse, obfuscate them. On the contrary, **actively draw attention to them; identify them in your conclusion as areas for further investigation.** Your PhD viva will go badly if you've attempted to disregard or evade the unresolved issues that your thesis has inevitably opened up." (Michael Perfect, PhD in English literature, University of Cambridge)

6) Buy your own laser printer

"A basic monochrome laser printer that can print duplex (two-sided) can be bought online for less than £100, with off-brand replacement toners available for about £30 a pop. Repeatedly reprinting and editing draft thesis chapters has two very helpful functions. Firstly, it takes your work off the screen and onto paper, which

is usually easier to proof. Secondly, it gives you a legitimate excuse to get away from your desk." (James Brown, PhD in architectural education, Queen's University Belfast)

7) Checking is important

"On days when your brain is too tired to write, check quotations, bibliography etc so you're still making progress." (Julia Wright, professor of English at Dalhousie University, Canada)

8) Get feedback on the whole thesis

"We often get feedback on individual chapters but plan to get feedback from your supervisor on the PhD as a whole to make sure it all hangs together nicely." (Mel Rohse, PhD in peace studies, University of Bradford)

9) Make sure you know when it will end

"Sometimes supervisors use optimistic words such as 'You are nearly there!' Ask them to be specific. Are you three months away, or do you have six months' worth of work? Or is it just a month's load?" (Rifat Mahbub, PhD in women's studies, University of York)

10) Prepare for the viva

"Don't just focus on the thesis - the viva is very important too and examiners' opinions can change following a successful viva. Remember that you are the expert in your specific field, not the examiners, and ask your supervisor to arrange a mock viva if practically possible." (Christine Jones, head of school of Welsh and bilingual studies, University of Wales Trinity St David)

11) Develop your own style

"Take into account everything your supervisor has said, attend to their suggestions about revisions to your work **but also be true to your own style of writing**. What I found constructive was paying attention to the work of novelists I enjoy reading. It may seem that their style has nothing to do with your own field of research, but this does not matter. You can still absorb something of how they write and what makes it effective, compelling and believable." (Sarah Skyrme, PhD in sociology, Newcastle University)

12) Remember that more is not always better

"A PhD thesis is not a race to the highest page count; don't waste time padding." (Francis Woodhouse, PhD in mathematical biology, University of Cambridge)

13) Get a buddy

"Find a colleague, your partner, a friend who is willing to support you. Share with them your milestones and goals, and agree to be accountable to them. This doesn't mean they get to hassle or nag you, it just means someone else knows what you're up to, and can help to check if your planning is realistic and achievable." (Cassandra Steer, PhD in criminology, University of Amsterdam)

14) Don't pursue perfectionism

"Remember that a PhD doesn't have to be a masterpiece. Nothing more self-crippling than perfectionism." (Nathan Waddell, lecturer in modernist literature, Nottingham University)

15) **Look after yourself**

"Go outside. Work outside if you can. Fresh air, trees and sunshine do wonders for what's left of your sanity." (Helen Coverdale, PhD in law, LSE)

Useful Links:

[How To Write a Good \(no, Great\) PhD Dissertation](#)

[How to write a good PhD thesis and survive the viva](#)

[Writing Up your PhD](#)