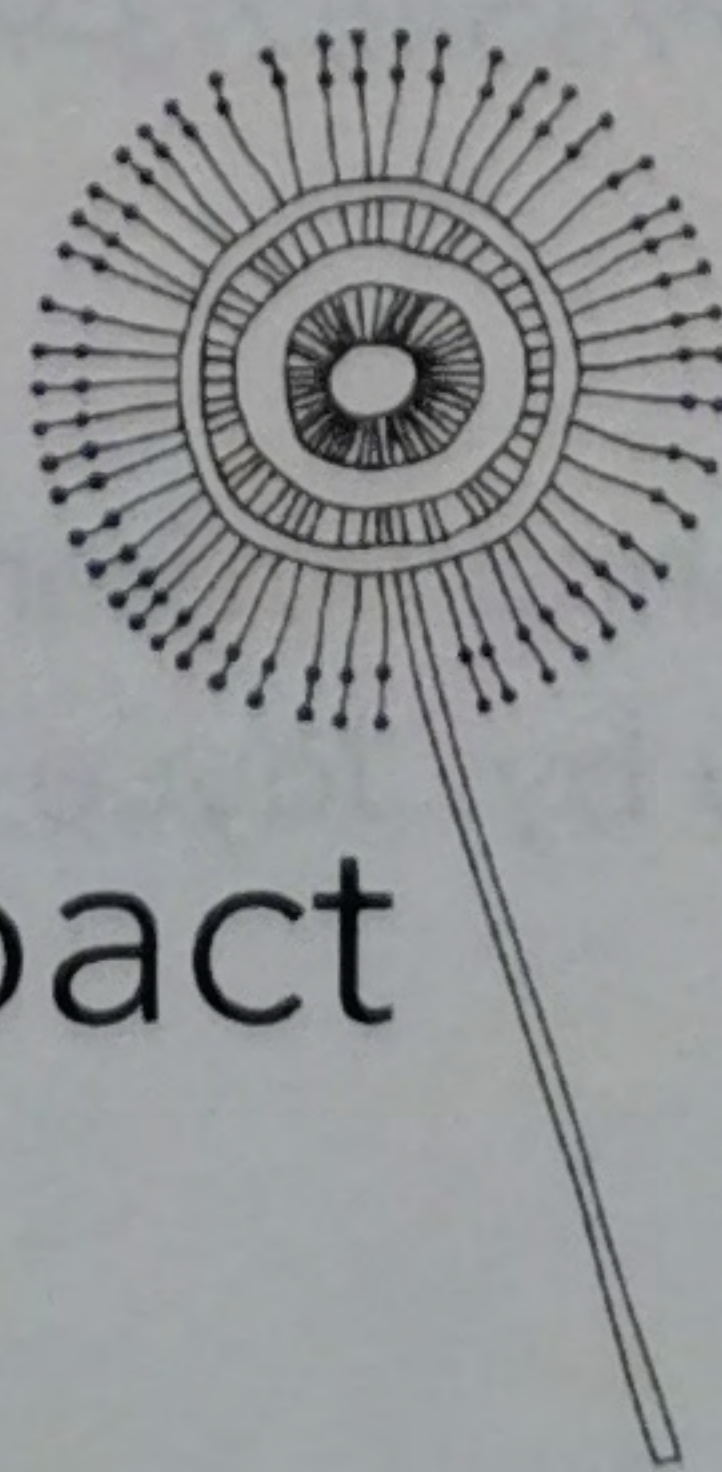


THE **PRODUCTIVE RESEARCHER**

Mark S. Reed



Fast Track Impact



Chapter 8

How to write a literature review in a week

Writing is a major challenge for many researchers. I will explore some of the reasons why writer's block is so prevalent and how to tackle the root causes of this problem in the next chapter. In this chapter, I want to focus on practical strategies for writing efficiently.

Don't wait for uninterrupted time to write

Before I explain my writing technique, it is worth confronting a widespread myth amongst researchers I know. This is the idea that you need to have long stretches of unbroken time if you ever want to write. Some wait years for a sabbatical, while others wait for their students to go on holiday. Most researchers are looking for at least one full, uninterrupted day. However, many tell me that this is not enough; to make real progress on a writing project, they need at least two or three uninterrupted days in a row. The problem, of course, is that this very rarely happens (even when we are on sabbatical), and as a result, writing projects are postponed indefinitely. Like many other researchers, I have now reached a stage in my career where it is challenging to find a day or more of uninterrupted writing time more than a couple of times a year. This presents us with a choice: we either adapt to our new circumstances or we stop writing.

One of the researchers I interviewed for this book, Professor Gwojen from National Taiwan University of Science and Technology has come up with a similar approach to me to solve this problem. Instead of waiting for a "free day" to write, he breaks every writing task down into different-sized chunks. They could vary from "writing the introduction" to "write a paragraph about X" or "incorporate insights from X literature into paragraph X". Then, Professor Gwojen identifies slots of time in his schedule and matches the right-sized tasks to those slots, continuing until the last task is "proofread the full final draft".

I do most of my writing while travelling now, as my days away from home are typically full-day workshops or back-to-back meetings and my days at home tend to be punctuated by many planned calls. My busier work schedule has not prevented me from writing, as I now chunk up the writing process to fit my travel schedule. I might give myself a thinking task for the car journey to the airport, and start my literature review in the airport departure lounge, downloading key papers to read on the flight. Then during the flight I might aim to read all the papers I downloaded, or aim to write a complete first draft of the methods or results section, depending on the length of the flight. After taking a break finding the train at the other end, I might then set myself the task of reviewing what I have written so far, or looking up the papers I found in the reference lists of the papers I read on the plane, and committing to emailing the paper in whatever form it is in to my co-authors before I arrive at my destination, asking for inputs before I need to fly home again (if that's reasonable), explaining what I plan to complete on the home journey.

My writing technique

As a researcher, you have probably already developed writing techniques that work effectively for you. I am not suggesting that you necessarily adopt my technique, but as you interrogate my practice, critically examine your own practice, and see whether there are ways you might be able

to significantly increase the efficiency with which you read and write for academic audiences.

I discovered this technique during my undergraduate degree when I arrived at a 9 o'clock lecture to discover my classmates handing in two essays that were due at 5 o'clock that afternoon. I had forgotten to write the deadline in my diary and hadn't started work on my essays. I was a lower second-class student at the time, but between the end of that lecture and the deadline that afternoon I produced my first ever first-class essays, scoring 90% for one and 95% for the other. I used the technique for the rest of my essays in my Undergraduate degree and Masters degree and never scored less than a first-class mark. I wrote my PhD thesis part-time with a teaching job in the same time it took many of my colleagues to write their thesis full-time. I used the technique to write my first published literature review in a week, and it has now been cited 2000 times.

I have subsequently taught my technique to hundreds of university students with an incentive to try it in practice: use my technique on any of your essays except the ones I set you, I told them, and if you don't get a first-class mark, I'll buy you a bottle of wine. In all the years I was allowed to run this scheme (I was eventually told I was making life too easy for students), only one student came to claim their bottle, but when interrogated they admitted that they had only followed half of my steps.

The principles behind my technique are basically good scholarship and efficient use of information technology to organize your thoughts:

- Learn how to speed-read: you don't need to read every word of every paper you cite
- Stay focused on your question(s) so you can extract the key points
- Organize what you've read efficiently
- Find a system to link key points together into critical arguments as part of an overall narrative
- Put clear limits on the number of hours you work if you want to retain a creative edge

Table 3 shows what my week might look like if I'm writing a literature review from scratch. I have designed this for writing a literature review for submission to a journal, which might be anywhere between 5,000-8,000 words long. You can follow the same process, but expand it to five weeks rather than five days for a book-writing project. Finally, many of the papers and books we will write as researchers have many other components in addition to a literature review. This process applies to the literature review component of that project, and therefore it may take you significantly less than a week to complete.

Table 3: How to write a literature review in a week

Day and time	Task
Day 1: Scoping your search terms and general reading	
09.00-10.00	Scoping
10.00-17.00	General reading
Day 2: Concept mapping and targeted reading	
09.00-11.00	Concept mapping
11.00-14.00	Thinking time
14.00-17.00	Targeted reading
Day 3: Targeted reading and writing your introduction	
09.00-12.00	Draft your introduction
13.00-17.00	Targeted reading
Day 4: Write your first full draft	
09.00-17.00	Writing
Day 5: Review your draft and finalize your work	
09.00-17.00	Reviewing and writing

Day 1: Scoping your search terms and general reading

09.00-10.00 Scoping:

- Do an internet search to refine your search terms, using a standard search engine like Google, browsing widely to get a sense of the different ways people are writing about your topic area. I may have started with a fairly narrow remit, constrained through my use of language to a single discipline or tradition, but now I am aware of other terms being used in different disciplines or other contexts, and related concepts. One of the most challenging criticisms from reviewers is that you missed an important search term that would have completely changed the outcome of your review had you included it. This first step reduces the likelihood of becoming blinkered by your disciplinary roots.
- Drawing on as many of your search terms as possible, create an overarching question that your reading will answer. If necessary, you can break this down into a set of related sub-questions, but try and keep this to the bare minimum, so it is easy to keep your question in mind at all times. Write this question and your search terms on a piece of paper and stick it to your wall or computer, and keep it at the forefront of your mind for the whole process

10.00-17.00 General reading:

- Prioritize what you read by relevance, making sure the scholarly search engine you use is set to sort results by relevance rather than date. If you use Google Scholar, it will also prioritize by citations, so you may need to follow up with a search of material published in the last 2-3 years, which may be highly relevant but has not yet attracted many citations.
- Speed-read the search results:
 - Keeping your overarching question(s) and search terms clearly in your mind, quickly read the titles of the articles and books that come up in your search, skipping to the next title as soon as it becomes

clear that a title isn't relevant (you might only read the first three words of the title to determine that it is not relevant). Only read the full title if you think it might be relevant

- If (and only if) you think the title looks relevant, move to the abstract. Read the first one or two sentences and the last sentence to quickly determine if it is actually relevant, and only if it is relevant, read the full abstract
- If the abstract has only minor or tangential relevance, make a note of the point you think might be relevant and go back to your search
- Only if the abstract suggests the publication is highly relevant to your question do you then access the publication
- Remain sceptical as to the relevance of the publication, and start by reading the introduction and conclusion to confirm its relevance. If it is genuinely relevant, read the full paper. If you're not sure how relevant it is, save it to come back to later, and don't waste time reading it now
- Instantly, you have significantly reduced the number of words you have to read, saving you time, and reducing the likelihood that you go off at tangents from your topic. The key to this working is being highly disciplined in your focus, returning to your questions(s) and keywords as soon as you lose sight of them and start going down an interesting but potentially less relevant side street
- Create a searchable system for thematically organizing what you learn from your reading. I use a spreadsheet for this task:
 - I copy and paste relevant sentences/paragraphs to cells in Column A, putting them into themes that help answer my question as I go
 - In column B, I paraphrase what the quote means in relation to my question in as few words as possible
 - In column C, I copy and paste the full reference (by hitting the "cite" link on Google Scholar) so it is

easy to compile my reference list later. If you're using citation management software, put it in there too for later

- As I read new material that adds to a theme, I insert rows in my spreadsheet and put the material under the relevant theme. Sometimes, it becomes clear that there are a number of sub-themes emerging within a theme, and so I pull out those sub-themes, using a numbering or formatting system to show that they relate to a higher-level theme. Sometimes the opposite happens, and I realize that writers from two different disciplines are actually talking about the same thing using different words, and I merge two themes into one
- I stop reading at 5 o'clock and take the evening off, even if it feels like I've only scratched the surface. This is important because at this point, many people continue reading without realizing that they have fallen into a narrow or partial reading of their question. The next step is designed to identify if this has happened and help you broaden your reading to cover the relevant breadth of material efficiently

Day 2: Concept mapping and targeted reading

09.00-11.00 Concept mapping:

- After a good night's sleep, I review the previous day's work, focusing on the themes that emerged from my reading. I resist the temptation to continue reading at this point
 - Sort the themes and sub-themes into a coherent structure. Which themes come first, and which come later? Which themes are linked to each other and how? I like to use a mind-map for this, using as few words as possible. You could create a more standard spider diagram, on the wall with Post-it™ notes or on a whiteboard. Alternatively, you could just copy and paste the themes and sub-themes from your spreadsheet into a word processing document, and play with their order using bullets

and sub-bullets or numbered lists, till you are happy that you have found a coherent structure that links your themes

- Look for the most important themes that provide the most powerful or useful answers to your question, and see if you can aggregate your themes under the smallest possible number of meta-themes. These meta-themes will provide a strong overall structure to your argument, and may end up forming sub-titles in your written work
- Now look for gaps. These may be apparent just by looking at the density of branches in your mind-map or sub-bullets in your word-processed list of themes. Which elements have least detail, and do you think this lack of detail might represent a gap in your knowledge of the subject? Another approach is to look for additional links. Which themes do you think should in theory be linked in some way, and have you read anything that would suggest a link? If not, might this represent a gap in your knowledge?

11.00-14.00 Thinking time:

- Go for a walk, take lunch with a friend, forget about work
- Let your review structure gradually settle in your mind
- Try and get some distance from your work, so you can come back and see a bird's eye view of the whole narrative as it is forming, to check if it really holds together coherently
- Alter your structure and look for additional gaps

14.00-17.00 Targeted reading:

- Do targeted literature searches to plug gaps in your knowledge, based on the concept mapping you have done
- Integrate what you learn into your spreadsheet under each of the emergent themes
- Stop reading at 5 o'clock, no matter how fascinating it is or how much more you now realize you need to read.

Don't worry, you can pick this up again in the morning, and you'll be faster and more focused after a good night's sleep

Day 3: Targeted reading and writing your introduction

09.00-12.00: Draft your introduction:

- Although you haven't finished reading yet, now is the time to write the hardest part of your literature review, when you've read enough to get a sense of the key arguments and the structure you will follow, and while you are still fresh. Don't put this off. Give yourself a strict deadline before lunch to have a rough draft of your introduction, including clear aims, and put pen to paper.
- This step is an additional check to make sure that the structure you developed yesterday really does work, and that there aren't any major gaps in your logic or planned structure. Sometimes this only becomes apparent when we try and write the introduction

13.00-17.00 Targeted reading:

- After rewarding yourself with a good lunch break, continue with your targeted reading, adapting what you read to any gaps you identified while writing your introduction
- Return to any of the most relevant papers you didn't have time to read properly on the first day and read them in detail

Day 4: Write your first full draft

Now you need to actually write your literature review. Two days is more than enough if you have followed the preceding steps, because now you have a detailed blueprint for your review:

- Follow the structure you have laid out in your mind-map, cross-referencing from each branch of the mind-map to the relevant theme heading in your spreadsheet

- Read through your paraphrases (column B) to get a sense of what the literature says about a particular theme, and start to arrange this in your mind into a coherent structure, swapping the order or rows around in the spreadsheet to help you remember how the argument is forming in your mind
- Write a paragraph or sub-section based on the material in that theme, copying and pasting your original paraphrasing into your review if you get stuck, and referencing the relevant literature for each point you pull out of the spreadsheet

Day 5: Review your draft and finalize your work

Even if you didn't finish a full draft yesterday, start your last day by reviewing what you've written so far, refining your language and arguments. Finish the remaining sections and send to a friendly colleague for pre-review feedback or co-authorship. This may throw up a few additional jobs you have to complete before you can finalize your manuscript for submission, but you will have broken the back of this task in a week, and it will feel like you're cycling downhill from here.

What will you do differently?

As I said at the start of this chapter, few researchers will want to adopt my technique exactly as I use it. My hope instead is that you look at this technique and ask yourself if there might be ways of adapting your own writing process to become significantly more efficient. How focused are you when you write? Do you prioritize resting and thinking time, as well as time for reading and writing? How efficient are your methods of identifying and linking relevant points from the literature? Can you find more efficient ways of identifying and structuring arguments that make it quicker and easier to write well?

There are two reasons why my technique saves time, and these can be generalized to apply to your own writing technique. The first is that I am reading fewer words. A

number of the techniques I use are designed to reduce the number of words I have to read, from speed-reading selected parts of the publications I identify as relevant, to identifying key insights and structure as I read, so I can identify gaps and prioritize my searching and reading to fill those gaps instead of reading endlessly until something coherent emerges. I know when to stop reading because I reach a point at which there are increasingly fewer new ideas emerging from what I have read; I have reached "theoretical saturation". The second reason that my technique saves time is that I have a method (based loosely on Grounded Theory Analysis) for identifying emergent themes, which helps me structure my thinking, and hence my writing, providing me with a road map to the eventual paper, section by section, paragraph by paragraph, which when complete retains a critical and coherent overarching narrative.

What methods do you use to get through the volume of reading that is necessary for a good literature review, how do you decide when to stop reading, and how do you keep track of the themes and insights that emerge as you read? If you do not already have answers to these questions, I hope that my technique might inspire you to develop some new methods of your own which will provide you with the answers.

If the secret to writing fast is reading less, then what else might we be able to do more efficiently if we thought differently about the way we use our time? In the next chapter, I want to broaden the idea of "doing less to do more" to encompass the full range of tasks we are likely to encounter as a researcher, and show the vital importance of rest and work-life balance if we want to stay productive and fulfilled.

Key lessons

1. Don't wait for uninterrupted time to write. Instead, break every writing task down into different-sized chunks and identify slots in your schedule and match the right-sized tasks to these slots
2. Learn how to speed-read: you don't need to read every word of every paper you cite
3. Stay focused on your question(s) so you can extract the key points
4. Organize what you've read efficiently
5. Find a system to link key points together into critical arguments as part of an overall narrative
6. Put clear limits on the number of hours you work if you want to retain a creative edge