Research Productivity Toolkit

Camille Andrews

What questions do you have about research productivity?

Keep Track

Created by Odile Harter for Unabridged

UNABRIDGED   A LIBRARY RESEARCH INTENSIVE

Your well-being matters most

- Financial stability

- Personal safety

- Mental health and emotional well-being
    - Unabridged module: "Self-Care for Scholars"

What you think you want:
One "automagic" solution

What you really want:
An Ecosystem of Tools

- Variety of software plus analog backup

- Promotes meta-awareness

- Supports a range of cognitive processes

- Adapts to your evolving workflow

- Includes desirable difficulties

- Prompts you to action

Part 1: Taking Notes

Consider r how you work best

Why take notes?

- Store
- Sort
- Summarize
- Select
- Share

Expand brain capacity

See: Ann Blair, "Note Taking as an Art of Transmission," *Critical Inquiry* 31:1

What is "intellectually productive"?

Two important distinctions

EASY ≠ EFFICIENT

NOW ≠ LATER

Easy is not the same as efficient

EASY ≠ EFFICIENT

NOW ≠ LATER

Easy ≠ Efficient
Metamemory and the Illusion of Mastery

"I can easily remember this now, therefore I will remember it easily later"

See: Janet Metcalfe, "Metamemory," *Oxford Handbook of Memory* (2000), especially p. 205

Easy ≠ Efficient
Elaborative Encoding

"the act of reaching into your brain, grabbing some knowledge, pulling it out, chewing on it, talking about it, and putting it back helps you learn… The more times you can do that process — putting knowledge in, getting it out, elaborating on it, putting it back in — the more you will have learned, remembered, and understood the material."

Jon R. Star interview with the Harvard Gazette, 8 Oct 2021

Easy ≠ Efficient
Desirable Difficulty

"introducing conditions that will slow the learner down, and make learning a bit harder—with benefits for long-term learning."

See: "Memory in Educational Settings," *The Oxford Handbook of Cognitive Psychology* (2013)

Easy ≠ Efficient
Beware Notes as Escape

Use your notes to tackle hard problems,
not to avoid thinking about hard problems!

Now is not the same as later

EASY ≠ EFFICIENT

NOW ≠ LATER

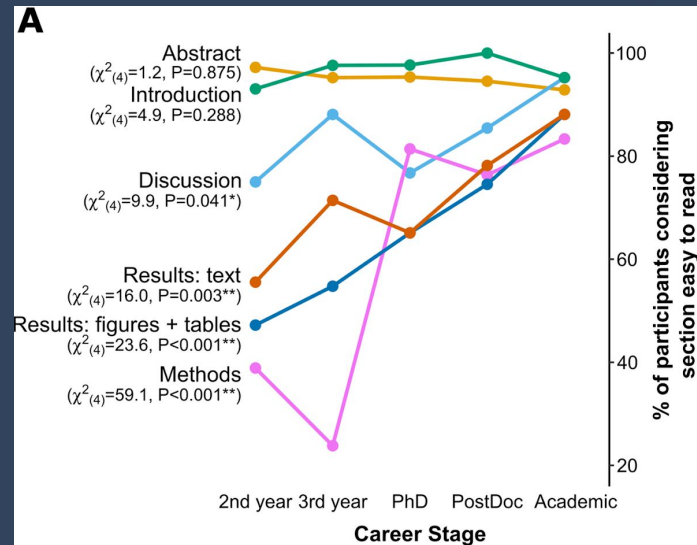*Now ≠ Later*
Research Involves Cognitive Development

The whole point of research is to learn. As you learn, you will change.

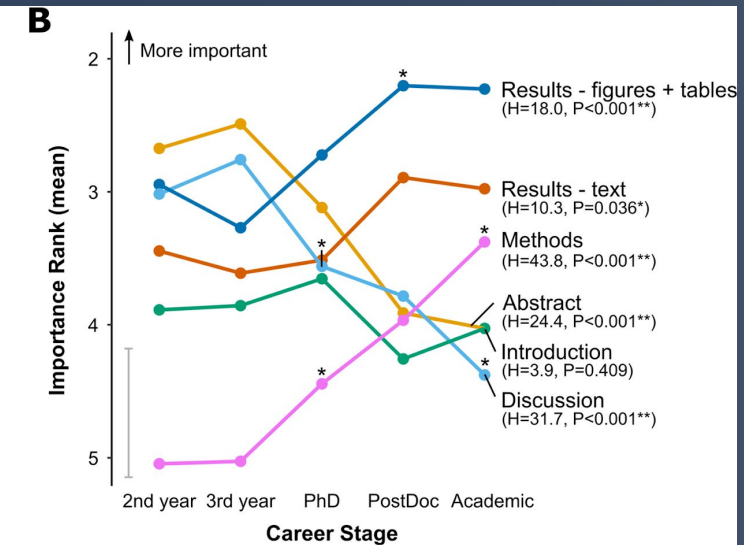Your future self may not find the same things difficult, useful, or important.

Now ≠ Later
What you value changes over your career

A: "easy to read"

B: "important"

"Perceptions of scientific research literature and strategies for reading papers depend on academic career stage." PLOS ONE 12(12)

Part 2: Software

A complement to <u>ALL ABOUT: Productivity Tools</u>

How to get advice...
from librarians

- How stable is the company that makes this software? Is it likely to be updated and supported indefinitely?

- Can you easily export your data out of the tool? Into what formats?

- Can you have an independent account or is it linked to another platform (Facebook, Google, etc.)?

- Does the tool's interface work well across multiple browsers and/or devices?

- Privacy & security: do you own the data you put in this tool? Does the tool meet appropriate information security standards for sensitive data?

How to get advice...
from your colleagues

tool set up research combination dissertation

dissertation organization tools helped me
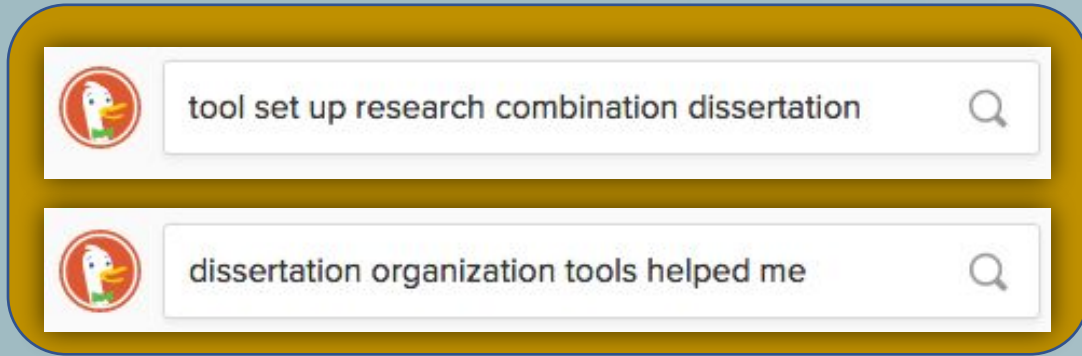
Ryan Cordell
@ryancordell

Follow

I avoided it a long time because I remain skeptical about the movement toward applications as subscriptions, but @bearnotesapp has a beautiful interface, excellent Markdown support, & an innovative system for sorting notes by tags—by far the best notes app I've found for iOS/OS X

5 tools to set up a LaTeX work environment, for a thesis dissertation in OSX

In MSc, Personal on 24 August, 2012 at 12:13 pm

LaTeX

**Learning to Do Historical Research: A Primer
The Pleasures of Note-Taking**

Reading as Though Your Mind Depended on It

PhD Tools: Vitamin-R and the Pomodoro Technique for Getting Going

Miriam Posner
Digital Scholar in Film, Education and Information Science

- Zotero
  - collecting and organizing sources, taking notes, citing sources

- Automator & Acrobat Pro
  - processing photographs from archives

- Handbrake
  - recording video

- Quicktime & Audacity
  - editing video and sound

- Scrivener & Microsoft Word
  - writing & finishing

- Keynote, SlideShare, & WordPress
  - sharing work

Alex Strick
Linguist

- FocusTime, PomoDone, Freedom App
  - Pomodoro Technique for "Four Perfect Hours"'
- Vitamin-R
  - track your concentration levels
- Pen, Paper, & Kindle
  - work with no internet or electricity

- Freewriting & Journaling
  - think through what's going on with your research
- Primary Sources
  - get yourself unstuck
- GoodReads & Beeminder
  - keep yourself reading widely

Glen Wright
Environmental Law (aka Academia Obscura)

- Citation Manager (e.g. Zotero)
  - make footnotes feel like a little less of a chore

- Scrivener
  - organize writing snippets by theme

- Evernote
  - electronic notebook for everything

- Trello, Calendar, & Coach.me
  - to-do's

- Unroll.me
  - aggregates listserv email into single digest

- Twitter
  - stay up to date

- Copy'em Paste
  - manage your clipboard (saves copied items)

- Hard drive backup

My Research Toolkit

- Google Docs/Drive for research notes
- Notion for project management/to dos in addition to Outlook
- Google Scholar and Scopus for search alerts; trying R Discovery, Scite.ai and Research Rabbit for additional research discovery
- Zotero for citation & document management (with Scite.ai plug in for citation counts), bibliography creation, annotation and note taking; Pinboard for web-based bookmarking
- Writing in Google Docs and/or Word

What's in your research toolkit ?

Specific tools

A smattering of examples

Specific software:
Zotero, including tags and notes
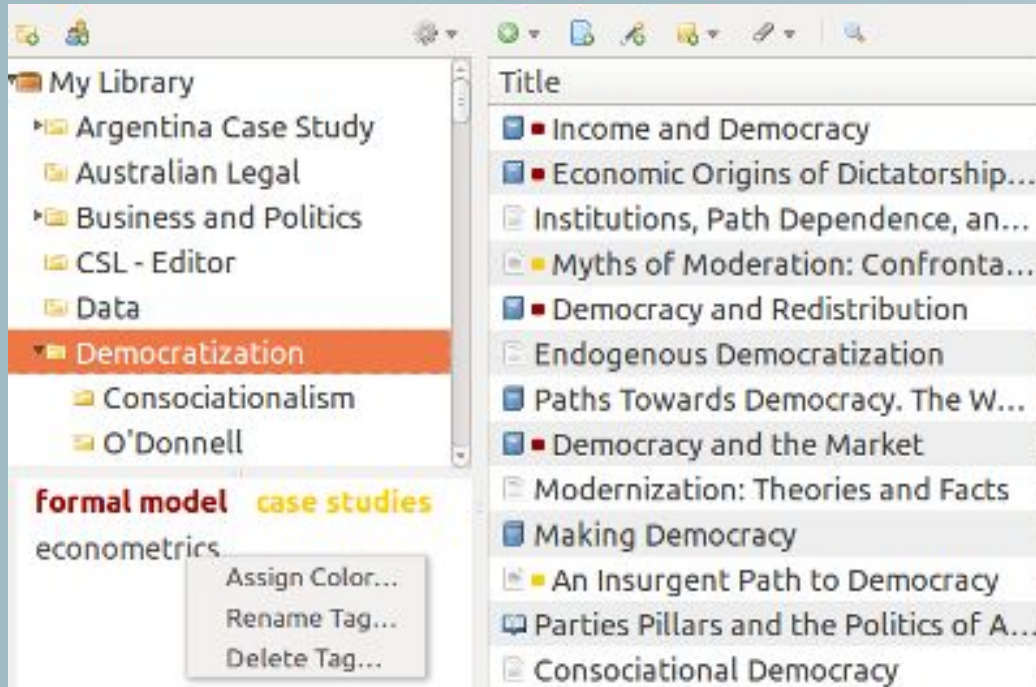
Image from Zotero.org

Specific software:
Tropy

Image from
Tropy.org

Specific techniques:
Pomodoro Technique

Image from Luca Mascaro via Flickr

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Specific techniques:
Kanban boards
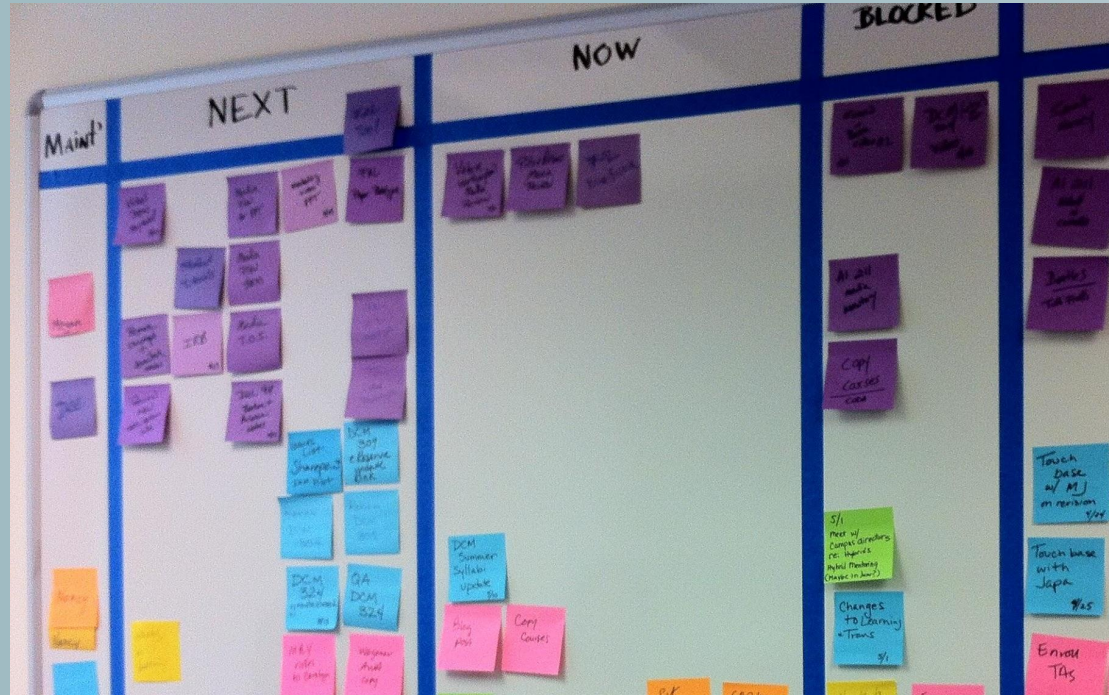
Image from IDDblog, DePaul University

Specific techniques:
Cornell Method notes

Cornell Note-taking Method - Lifehacker.com

Cues
* Main ideas
* Questions that connect points
* Diagrams
* Prompts to help you study

WHEN: After class during review

2.5 inches

Notes
* Record the lecture here, using
* Concise sentences
* Shorthand symbols
* Abbreviations
* Lists
* Skip lots of space between points

WHEN: During class

6 inches

Summary
WHEN: After class during review

* Top level main ideas
* For quick reference

2"

Specific techniques:
Sketchnoting

Image ©2012, Sacha Chua

Specific techniques:
Mindmapping
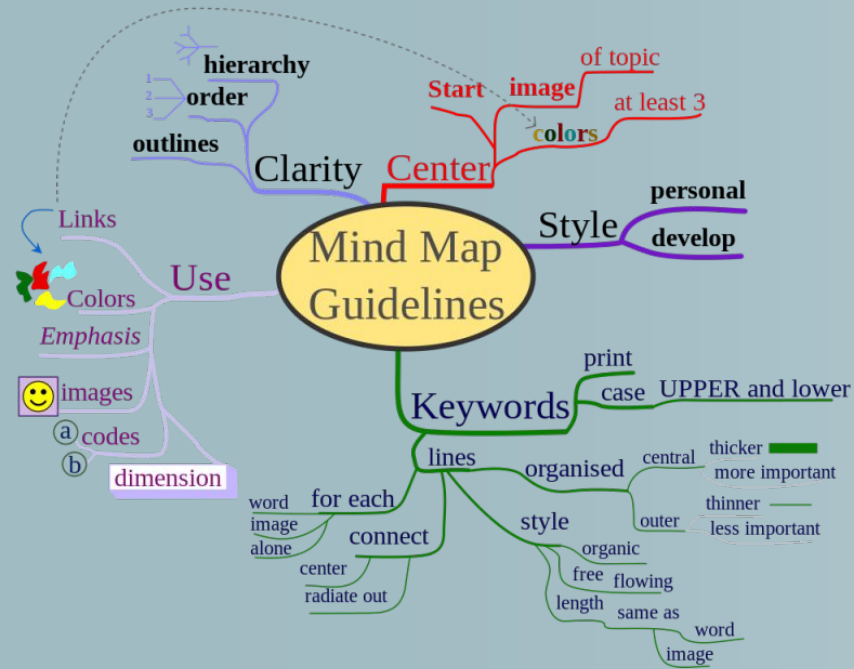
Illustration by Nicoguara
via Wikimedia Commons

Part 3: Content Management

Folders and filenames

Folders – by chapters and topics

CHAPTERS
- Chapter 1
- Chapter 2
- Chapter 3
- Chapter 4

TOPICS
- Proletarianism in the 1930s
- Allusion and quotation in literature
- New Deal politics
- Modernisms
- Marianne Moore

Folders – provisional names

OCEANS
- Atlantic
- Pacific
- Arctic
- Indian
- Southern

COLORS
- Red
- Orange
- Yellow
- Green
- Blue
- Purple

Folders – by process

NEXT STEP

- Check bibliography & footnotes
- To skim/review
- Definitely include
- Not relevant enough

ORIGIN

- HOLLIS search author=smith, format=manuscript/archives
- Found at Baker Library
- January 2020 research trip
- Fall 2019 courses

File names – what not to do

Richard Hammond
@NotTopGearRH

Follow

Replying to @phette23

Today I needed to compare some data with a set from last month to get the archive dataset and found 6 files:-

MD04 Sept
MD04 Final
MD04 Rebuild Final
MD04 Sept Actual
MD04 Rebuild Revised
MD04 Sept v3

The 4th one was the most recent.

3:03 PM - 12 Sep 2019

File names – what TO do

How to name files

What to include   **Other tips**   **Tools to rename files**

You may already have a lot of data collected for your project and wish ... files for easier data management. If you have too many files to renam... following applications for renaming your files:

- **Tips for renaming multiple items at once on Mac**
- **Advance Renamer** (Windows, free)
- **Bulk Rename Utility** (Windows, free)
- **Renamer 6** (Mac iOS 10.14 and higher, $19.99)
- **Rename** (Linux command line tool, free)

Caltech Library
File Naming Convention Worksheet

1. What group of files will this naming convention cover?
You can use different conventions for different file sets.
Example: This convention will apply to all of my microscopy files, from raw image throu...

2. What information (metadata) is important about these files and ...
Ideally, pick three pieces of metadata; use no more than five. This metadata should be ...
the file names and easily understand what's in each one.
Example: For my images, I want to know date, sample ID, and image number for that sa...

1:
2:
3:
4?
5?

3. Do you need to abbreviate any of the metadata or encode it?
If any of the metadata from step 2 is described by lots of text, decide what shortened i...
metadata from step 2 has regular categories, standardize the categories and/or replace ...
be sure to document these codes.
*Example: Sample ID will use a code made up of: a 2-letter project abbreviation (project ...
species abbreviation (mouse = "MUS", fruit fly = "DRS"); and 3-digit sample ID (assigned ...*

ORGANIZE YOUR FILES
File naming and folder hierarchy

Keeping track of research data and documentation is critical. Strategi...

- Spend time planning out both folder hierarchy and file namin... beginning of a project. Consider how you or others will look f... later date. Do you think about them by type, location, study o...
- Establish a folder hierarchy that aligns with the project. Exam... [Experiment] / [Instrument or Type of file]
- Consider all aspects of the project and develop a file naming ... important metadata. Example: [Date]_[Run]_[SampleType]
- Consider sorting when deciding what element of the file nam... starting with YYYYMM will sort differently than files starting w... format.
- Provide a method for easy adoption. Consider a shared dropb... hierarchy in place and a readme file in onboarding document... contributors.
- Check for established file naming conventions. Many disciplin... recommendations, for example: DOE's Atmospheric Radiation... program.

File names – *general considerations*

- Consistent is better than perfect

- You will forget the citation details

- You will end up with more units or versions than you anticipate

- Build for your own search habits

- Build for alphabetical sort

File names – with citation info

ARCHIVAL COLLECTIONS
Collection, Call number, Folder, Image

Child_MC660_1.1_001

NOW_MC666_2.1_001

ARTICLES
Author, Year, Journal/Book
 Blair_2004_CriticalInquiry
 Yong_2016_IContainMultitudes_ch3

Newspaper, Date, Author
 NYT_1895Mar04_Smith

Date, Newspaper
 1785_02_11_Rambler

File names - drafts

Project, Part, Version, Date
    Diss_LitReview_v03_2019_01_16

Date, Title, Comment
    2019_01_16_Chapter_2_reorganized

File names – how to write the date

YYYY MM DD

There is no single tool for or correct way to be productive with your research, just an ecosystem of tools and tips that work best for you

Resources

- Keep Track Unabridged workshop and All About Productivity Tools from Harvard University Libraries
- ChatGPT and Other AI Tools for Research workshop slides
- Data management workshop slides
- W&M Software site

Feedback on Workshop & Credit for Attending

Evaluation form