

CSD 598 - Winter 2026

Some thoughts on
Silent Knowledge in Doing Science

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If we are pressed for time

Possible topics are:

- ▶ Reading
- ▶ Note-taking in various contexts
- ▶ Tools of note-taking
- ▶ Writing
- ▶ Blank page fixes
- ▶ Dealing with problems

We will definitely cover

- ▶ Power differentials
- ▶ Relating to ideas
- ▶ Pacing

Reading

- ▶ How to read a paper? What's your strategy?
- ▶ A lot of articles and books and resources are available through U of A.

What to record when doing research

- ▶ This applies to studying, reading (also known as studying), recording data, analysing data, and writing up the results.
- ▶ Reflect on what you read: It's a good idea to keep a record of your developing understanding and especially of the questions you have.
- ▶ It's also a good idea to keep a record of any anomalies (or lack thereof) in data gathering because that makes analysis easier.

Tools of note-taking

- ▶ Notebooks are good and there are way more possibilities out there beyond a regular composition notebook, which is a very solid choice though.
- ▶ Knowledge management systems such as Obsidian, Notion, Logseq and others can also be very useful, but might be more difficult and distracting to use during data recording. is here.
- ▶ If you like formal systems look up Zettelkasten.
- ▶ Reflect on what you read: Keep your note-taking tools handy because idle minds produce excellent ideas.

Getting into writing

- ▶ Authorship guidelines and who gets invited to contribute to a paper.
- ▶ The process is not linear, unlike the stories in literature would have you believe.
- ▶ Falsifiability and its problems.
- ▶ How to separate personal experience from publishable stories while being honest.
- ▶ Rationalisation of results - Don't try to publish only negative results unless you see papers like that already done.
- ▶ Talk to people. Learn to scale the amount of detail you give.

Dealing with blank page: Quick fixes

- ▶ One of the easiest solutions is: Make a mistake and then correct it.
- ▶ If you foresee this cropping up, you can fix it before you get there by note-taking:
 - ▶ Reflect on other peoples texts. Even by just putting the article info on the top of a page and then writing about the article as you read it underneath.
 - ▶ Reflect on your own work. Guess what? You can apply the same principle to planning research, to recording data, to analysing data.

Dealing with blank page: Slow fix

- ▶ If you have a lot of time – a month or two – to prepare, take up journaling.
 - ▶ It does not really matter what you write about as long as you do so regularly.
 - ▶ It will improve your writing in general.
 - ▶ It will most likely make the fear of blank page disappear.
 - ▶ And journaling has other benefits.
- ▶ And seek people who are willing to read your text and give it positive, constructive feedback.
- ▶ Negative feedback leads to avoidance behaviours.

How to deal with problems

- ▶ Problems need about three (short) attempts before contacting the boss.
 - ▶ This is not because you are expected to solve problems on your own.
 - ▶ It's because those documented attempts can provide a more experienced person with information they need for solving the problem.
- ▶ Don't try to solve things for too long on your own either.
 - ▶ If you can't solve it, get help.
 - ▶ Also, if you don't know how to attempt a solution, get help.
- ▶ If something comes up that will change plans – things take longer, you can't work as fast as you thought, etc. – let others know earlier rather than later and they'll like you for it.

Power differentials

- ▶ Academia is littered with power differentials.

Recycle ideas, throw away ideas

- ▶ Don't reinvent the wheel unless absolutely necessary.
- ▶ Don't get married to your ideas.
- ▶ Intuition takes time to work.

Pace yourself, celebrate often

- ▶ It will take longer than you think.
- ▶ It actually still does with 25 years of experience.
- ▶ Get enough rest.
- ▶ While they can be impressive, sprints can't last much longer than a week.
- ▶ Our work is ephemeral. Take the time to mark and celebrate each milestone.

References

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