

CSD 598 - Winter 2026

Some thoughts on
Silent Knowledge in Doing Science

Pertti Palo

20 Jan 2026

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.
- ▶ We all need good working environments.

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

Many thanks to the CSB Monday morning speech coffee group for essentially writing most of this lecture.