D3 PhD Days

How to fail your PhD in 7 Easy Steps

François Taïani

(not from D3)
Disclaimer!

- **Aim**
  - Prompt *discussion*
  - Encourage your own *reflexion*

- **No claim to absolute truth**
  - Interested in your views
Small Exercice

Post-it

- If you are a PhD student write an D
- If you are/have been a PhD supervisor write an S

- **One key thing to do** to maximize a PhD's success
- **One key thing to avoid** to maximize a PhD's success
Always expect to be told what to do

- PhD = learning by doing
  - Similarity with apprenticeship / initiation

- A PhD ≠ school, or "normal" work
  - No detailed roadmap
  - Strong personal ownership

- Intrinsic paradox of supervision
  - Supervisor's help essential
  - But end goal = scientific autonomy

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Only expect successes

- Failing is part of the job
  - No risk, no unknown → no research

- Often hard to learn as
  - good undergrad ≠ good PhD
  - Role of external validation

- Research is competitive and global
  - Luck often involved in successes

- Do not get discouraged
  - Perserverance is key
The Dunning-Kruger effect
The Dunning-Kruger effect (for PhD)

You just started your PhD

After ~ 1 year

After ~ 2 years

At your PhD defense
Avoid / ignore feedback and criticism

- Feedback = essential to **progress**
  - Offer ability to grow / improve

- Science at heart a **collective** activity
  - Each **community** = own expectations
  - Early criticism = ➔ success
  - Supervisors, CSI, reviews, confs

- Ways to better process criticisms
  - Not about you but **your work**
  - **Context**-dependent
  - A means to improve, not final
Don't be curious

- Science = **dialogue** thru time/space
  - Reading (many) papers

- Robust approach to **bibliography**
  - Reading in selective depth
  - Incremental approach
  - Efficient note taking system

- More broadly
  - **Socializing** at conferences
  - Role of **science in society**
    (societal impact, ethics)

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Leave no written traces

- **Written** word essential to science
  - Books, papers, labbooks

- Taking **notes** from day one
  - Keep track of your journey
  - Nurture your creativity / inspiration
  - Basis for write-up

- Lifelong **skill**
  - Presenting complex ideas **clearly**
Do not build trust with your adviser(s)

- PhD – Supervisor relationship
  - Human, hence imperfect
  - Interpersonal: different styles
  - Evolves over time

- What your supervisor is not
  - Your nanny / personal secretary
  - In charge of your PhD's success

- Key aspect: respect
  - Goes both ways
  - Understand your advisor's constraints
No work-life balance

- A PhD can be **intense**
  - long-run is key
  - Clear PhD / life **boundaries**
  - Hobbies, recreation
- Emotional and physical **health**
  - Sleep, nutrition, exercises
- Discuss your problems
  - Personal **support network**
  - Your supervisor
  - Other contact persons (PhD **mediator**, Doct. School, …)

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3 Extra Rules

- **Procrastinate**
  - 3 years = long but also (very) short
  - Regular work routine = great help to most people

- **Do not interact with others**
  - Science is a social activity
  - Chain of knowledge

- **Do not think beyond your PhD**
  - Academic career? Industry? Freelance? Start-up?
  - Postdoc? In France? Abroad?
  - Talk! (Supervisors, older PhDs, young doctors, mentor)
To Look Further

- The Craft of Research

- Charte du doctorat du Collège Doctoral de Bretagne
  ➤ https://ed-mathstic.doctorat-bretagne.fr/fr/documents-de-reference

- Recommandation du comité d'éthique du CNRS (COMETS) en matière de déontologie de la recherche et de la formation doctorale
  ➤ Same link

- Most pictures from https://classicprogrammerpaintings.com/
7 Golden Rules (to Fail)

1. Always expect to be told what to do
2. Only expect successes
3. Avoid / ignore feedback and criticism
4. Don't be curious
5. Leave no written traces
6. Do not build trust with your adviser(s)
7. Have no work-life balance