



Tips and tricks for effective PhD

A guide to avoiding common pitfalls

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PhD journey: expectations vs reality

1st year: I will start my day at 6am, run 10km per day, eat healthy, work 10 hours per day, go to the office every day, publish a couple of papers per year, and *of course* my research will SAVE THE WORLD!

Final year: I will *try* to get up, perhaps put my clothes on, oh well, feel that's it for now...

What to do when reality strikes in

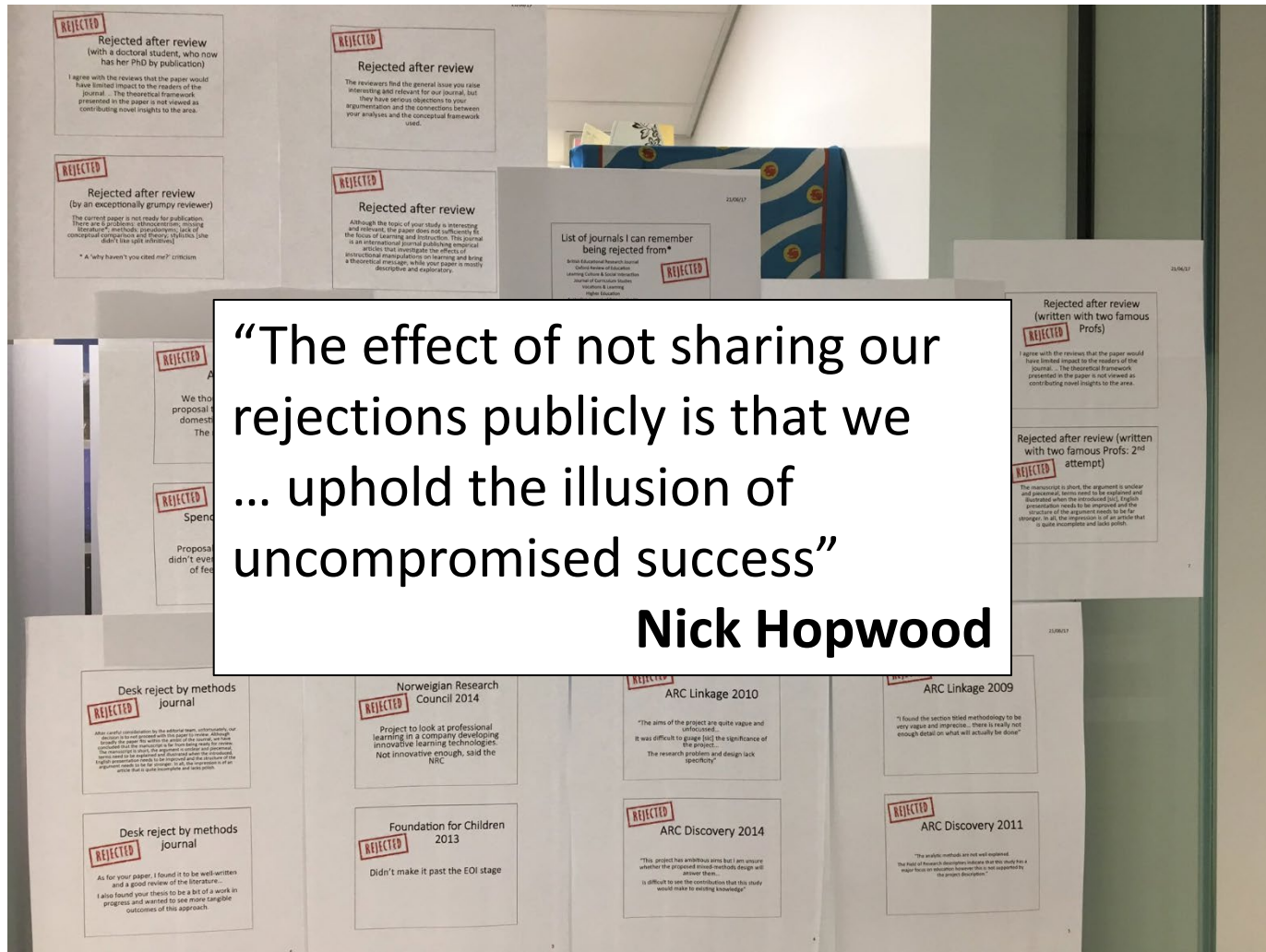
Reality behind every success



Perseverance is key



Resilience to rejections



<https://nickhop.wordpress.com/2017/06/21/my-wall-of-rejection-and-why-it-matters/>

You are not alone!

Lots of support on Twitter....

#PhDLife

#PhDAdvice

@Write4Research

@WriteThatPhD

@Dissertating

Mental health is important for effective research

Overcoming Adversity in PhD Research

Posted on October 26, 2017

Academia is sometimes portrayed as a noble pursuit. Yet I know that my journey to become an academic was, at least partly, a selfish one. Researchers often talk about the greater good as their guiding motivation, but it's worth remembering that many of us got into research simply because we loved doing research. The joy of discovery and learning, getting to play at the forefront of knowledge, the ego trip of doing something unique: once you critically analyse there's often a lot of selfish motivations.

The Importance of Self-Care: Advice to Graduate Students

Here is a shocker for you: life as a graduate student is hard work and quality advice to graduate students is hard to find. Graduate school takes a lot of time, money, effort, and endurance. Earning a PhD has been hard since its creation, and though some technological advancements have made some aspects of graduate school easier (i.e., a little thing called the Internet), earning a PhD will still be one of the most difficult accomplishments of your life.



Above all of your responsibilities as a graduate student (e.g., doing coursework, reading, teaching, writing papers, being on a research team, writing a dissertation or thesis, etc.), the most important responsibility you have is to take care of yourself. Yes, there will likely be some nights when you do not get much (if any) sleep, but, overall, you need to be sure that you are taking care of yourself. In the long run, taking care of yourself is some of the best advice to graduate students that we can give, as it will not only help you maintain your sanity and well-being throughout graduate school, but taking care of yourself will also make getting through graduate school easier.

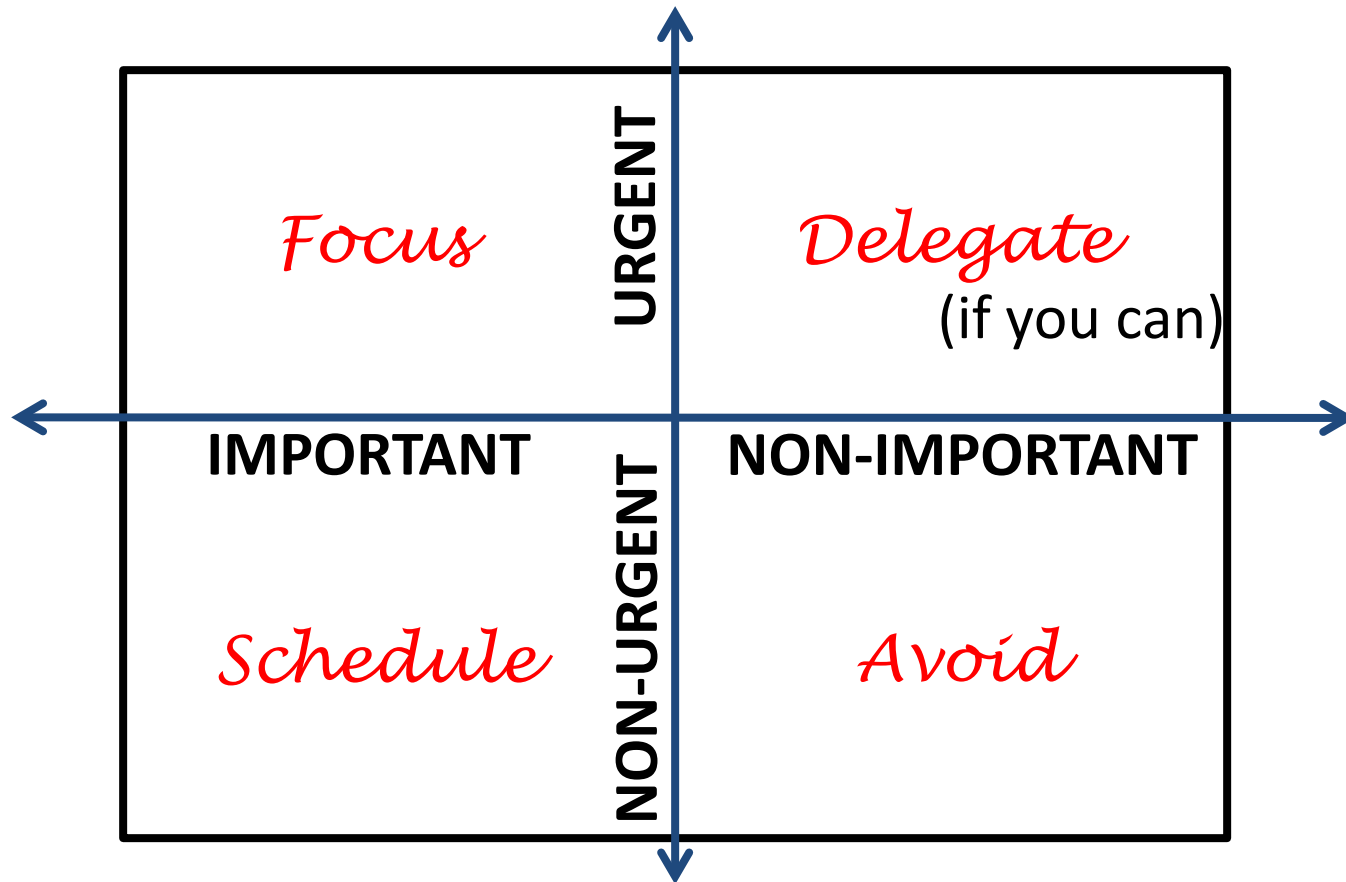
Sources: <https://www.phdstudent.com/Managing-Time-and-Stress/importance-of-self-care>
<http://verse.systems/blog/post/2017-10-26-Overcoming-Adversity/>

Reality behind every success



Learn to prioritize

- Have you heard of Eisenhower Matrix?
<https://papergazer.com/eisenhower-matrix/>



Practice focus

- Goldfish has officially beaten us

<http://time.com/3858309/attention-spans-goldfish/>

HEALTH • NEUROSCIENCE

You Now Have a Shorter Attention Span Than a Goldfish



By KEVIN MCSPADDEN May 14, 2015

The average attention span for the notoriously ill-focused goldfish is nine seconds, but according to a **new study** from Microsoft Corp., people now generally lose concentration after eight seconds, highlighting the affects of an increasingly digitalized lifestyle on the brain.

- Try Pomodoro technique

https://en.m.wikipedia.org/wiki/Pomodoro_Technique

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More time management techniques

- Pareto analysis
- TODO lists
- POSEC method

Heaps of sources online - use them!

Now that you are all covered...

Let's start your PhD journey

Choose your advisor carefully

- A PhD is like a (shorter) marriage
- Make sure it fits
- Does your advisor care about things you care about?
- Are you flexible and trust your advisor to guide you?
- Do you have skills your advisor expects you to have?



Find your passion

- What would you do even if you are not paid?
- What keeps you awake at night?
- What makes you jump out of the bed in the morning?



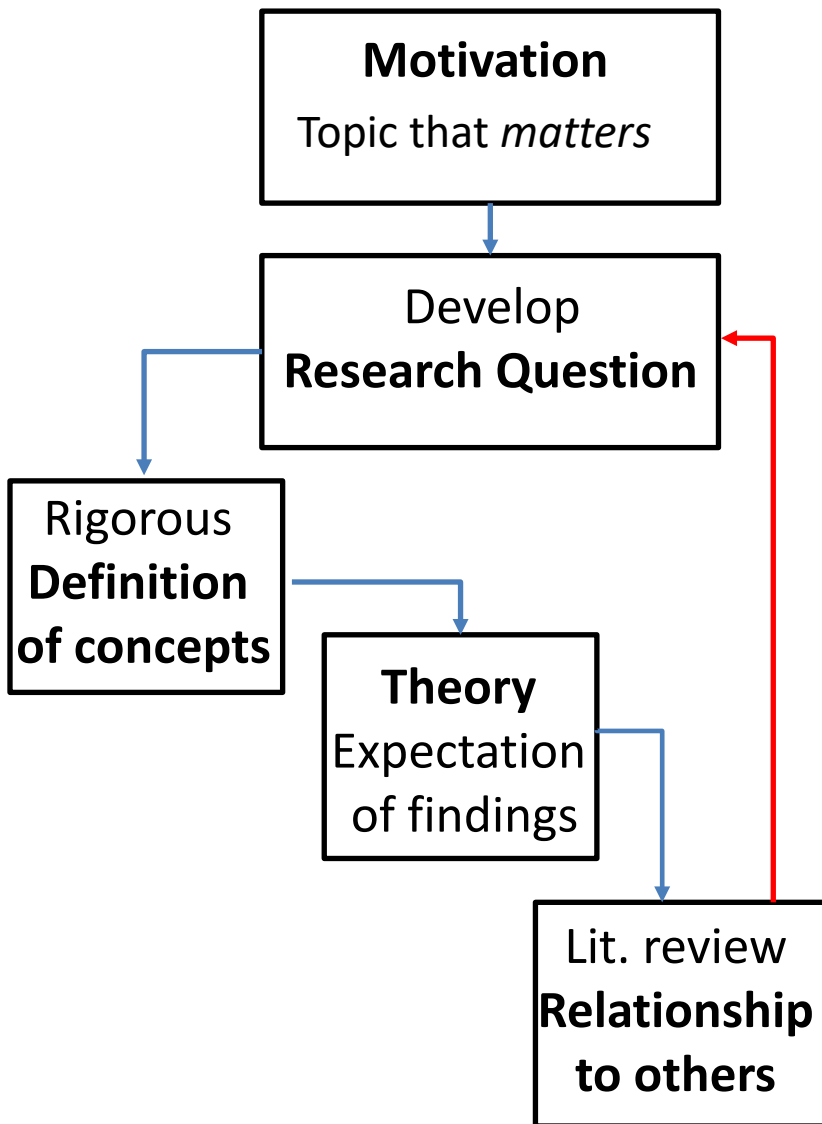
10 easy ways to fail a PhD

- <http://matt.might.net/articles/ways-to-fail-a-phd/>
 1. Focus on grades
 2. Learn too much
 3. Expect perfection
 4. Procrastinate
 5. Go rogue too soon/too late
 6. Treat PhD like school or work
 7. Ignore the committee
 8. Aim too low
 9. Aim too high
 10. Miss the real milestones

Writing your research proposal

- <https://www.monash.edu/learnhq/resources/write-like-a-pro>
- **The purpose of a research proposal is:**
 - To *propose a research project* that will result in a significant *contribution to knowledge*
 - To formulate a *detailed plan* of the project including methodological approach and theoretical framework
 - To ensure that the proposed research *is achievable* within the required time and with the available resources
 - To demonstrate that you have adequate *expertise* and *experience* to undertake the project

Formulate your research question



Problem	The signs	Solution
Unclear question	You're working hard but don't seem to be making progress. You're spending lots of time on side issues, changing your mind, finding lots of tangents that look interesting.	This may be a sign that your question is not clear enough. Try to get it down to a few short sentences. What are you trying to find? Keep asking the "So what?" question. It might be useful to try and explain what your research is about to someone. They don't have to be an expert. Write down your understanding of your question. Talk to your supervisor.
You have a question but keep getting distracted by interesting side issues.	As you get immersed in the literature and research, lots of interesting topics emerge. You spend a lot of time on tangential issues.	There are endless interesting questions to answer but you only have time to do one PhD. Once your question is clear, write it out in big letters on one sheet of paper and stick prominently near your computer screen. As you get distracted read the question, and decide if what you are reading or working on is directly relevant to your question. If you can't bear to let the new idea go, get a Good Ideas box and put it in there. You can come back to it when your PhD is finished!

Source: Planning you PhD, pg 123

Be up to date in your field

- <http://blogs.lse.ac.uk/impactofsocialsciences/2018/05/18/how-to-keep-up-to-date-with-the-literature-but-avoid-information-overload/>
- **How to keep your head above water:**
 - Set up citation alerts for your own articles
 - Set up new article alerts for academics in your field
 - Set up new article alerts for key topics in your field
 - Periodically review core journals/conferences in your field



The entire research process

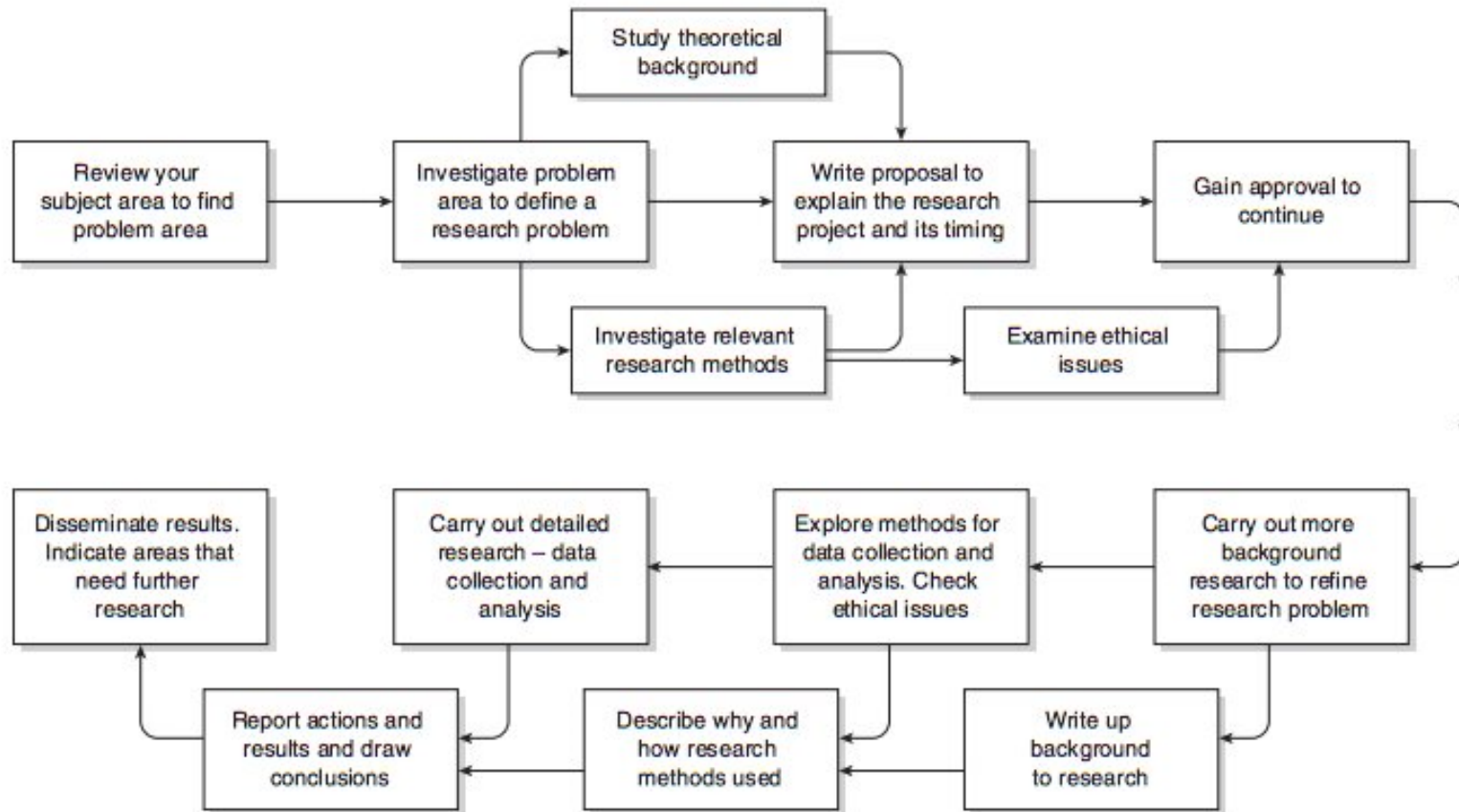


Diagram 1.4 The research process

Source: Your Research Project, Designing and Planning Your Work, Nicholas Walliman

A note on experiments....

- **Repeatability is key**
 - Create scripts for experiments
 - Automate graph creation
 - Have experimental graphs recreated on a click of a button
- Plan the entire experimental section in advance

Investment early pays off in the long run

What others say

“Talk to different people especially the ones with different backgrounds”

“Write paper introduction with “fake” results before doing actual research”

“Write text for non-experts”

“Develop PoC quickly – fail (or succeed) fast”

Once you are on your track

12 resolutions for grad students

[\[article index\]](#) [\[email me\]](#) [\[@mattmight\]](#) [\[rss\]](#)

In graduate school, the emphasis on the current mission can be so constant and so blinding that students forget the tasks without deadlines.

In the spirit of the new year, I've created a list of twelve monthly resolutions for graduate students.

These resolutions round out the graduate experience and prepare students for the long term:

1. Map out the year
2. Improve productivity
3. Embrace the uncomfortable
4. Upgrade your tools
5. Stay healthy
6. Update your CV and web site
7. Keep your eye on the job market
8. Network
9. Say thanks
10. Volunteer for a talk
11. Practice writing
12. Check with your committee

<http://matt.might.net/articles/grad-student-resolutions/>

<http://matt.might.net/>

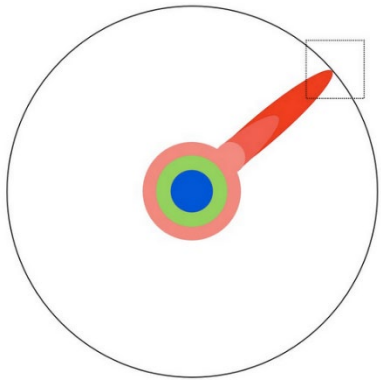
What after?

- Heaps of advice out there:
 - <https://theprofessorisin.com/>
 - <https://thesiswhisperer.com/>
 - <http://matt.might.net/articles/>

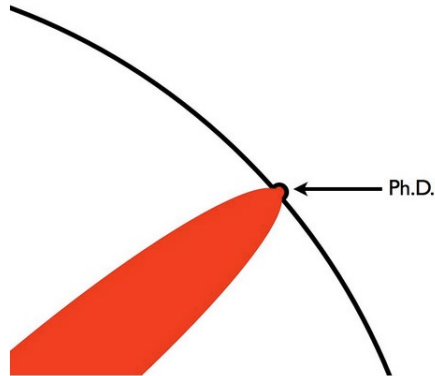
Keep pushing

- **The Illustrated Guide to a PhD**

<http://matt.might.net/articles/phd-school-in-pictures/>



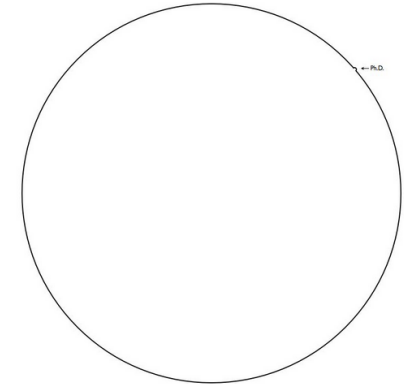
1)



2)



3)



4)

Q & A

THANK YOU!

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