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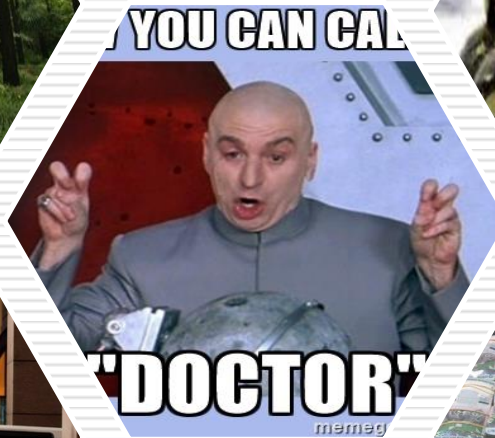
MATHEMATICS WITH ECONOMICS
FACULTY OF SCIENCE AND NATURAL RESOURCES
UNIVERSITI MALAYSIA SABAH

Graduate On Time (GOT)

Why do you want to do a master/PhD research?



You like the title Dr to precede your name.



Your friends are doing it.



Would rise your social status.



Fulfilling the ambitions of others.

Are you prepared for a research postgraduate Study?



A Master/PhD degree is not a souped-up Bachelor degree. You need to have very good reasons, the discipline, and the capability of pursuing a postgraduate research degree.

Good reasons to do a Master/PhD.



To achieve something significant

Those who have ambitions to make money should become entrepreneurs.

But if you are ambitious in that you wish to challenge yourself, push yourself to new heights or achieve a difficult goal then a master/doctorate may be for you.

To discover or learn something new and becoming an expert in your area.

If you feel a driving force pushing you to explore and learn new things, then you may love research. You might have a natural thirst for knowledge or an insatiable appetite for reading books about a particular topic



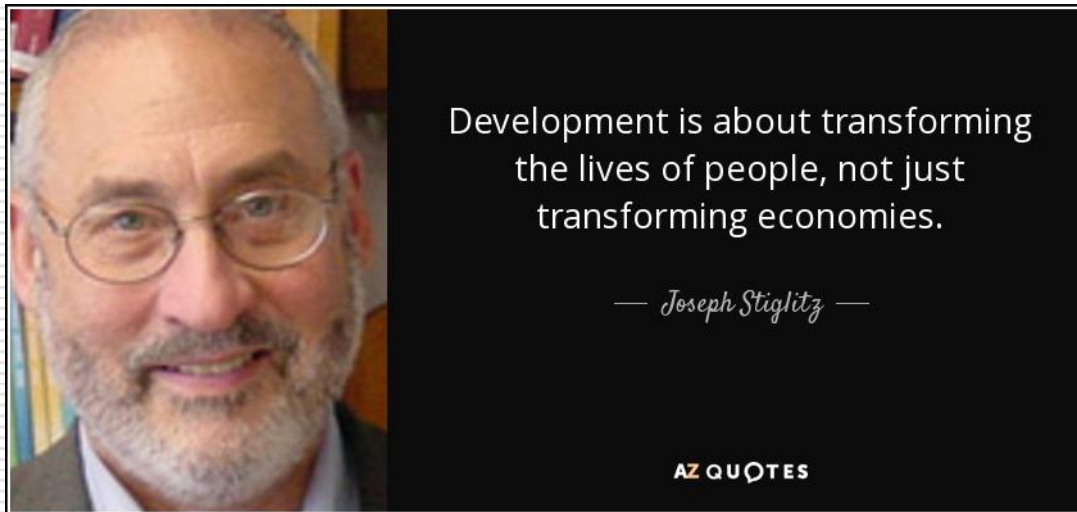
Computer science reaches historic breakthrough

Supercomputer performs 1,000 trillion operations per second



You see this period of your life as a unique opportunity.

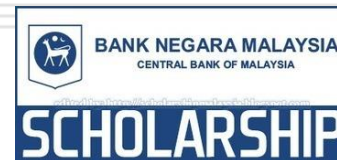
Improve your abilities to understand and solve problems, increase your confidence, make yourself a better communicator and gain skills may lead to a better job.



You have been offered a scholarship

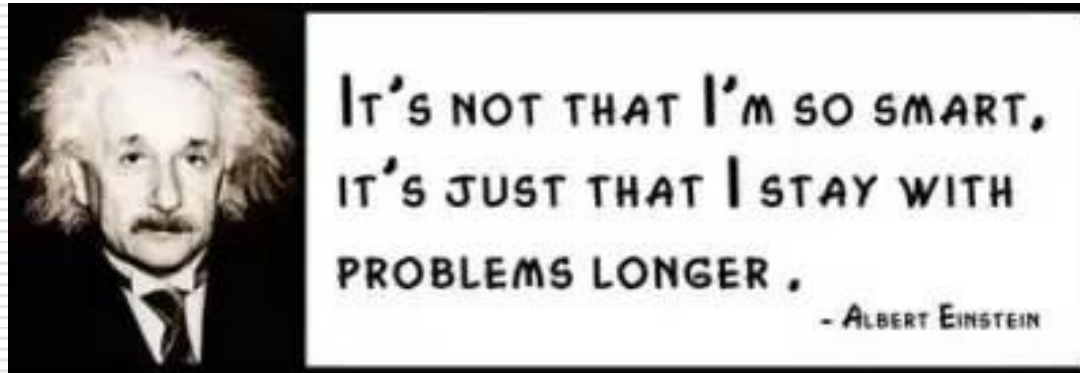


Kementerian Pendidikan Tinggi Malaysia



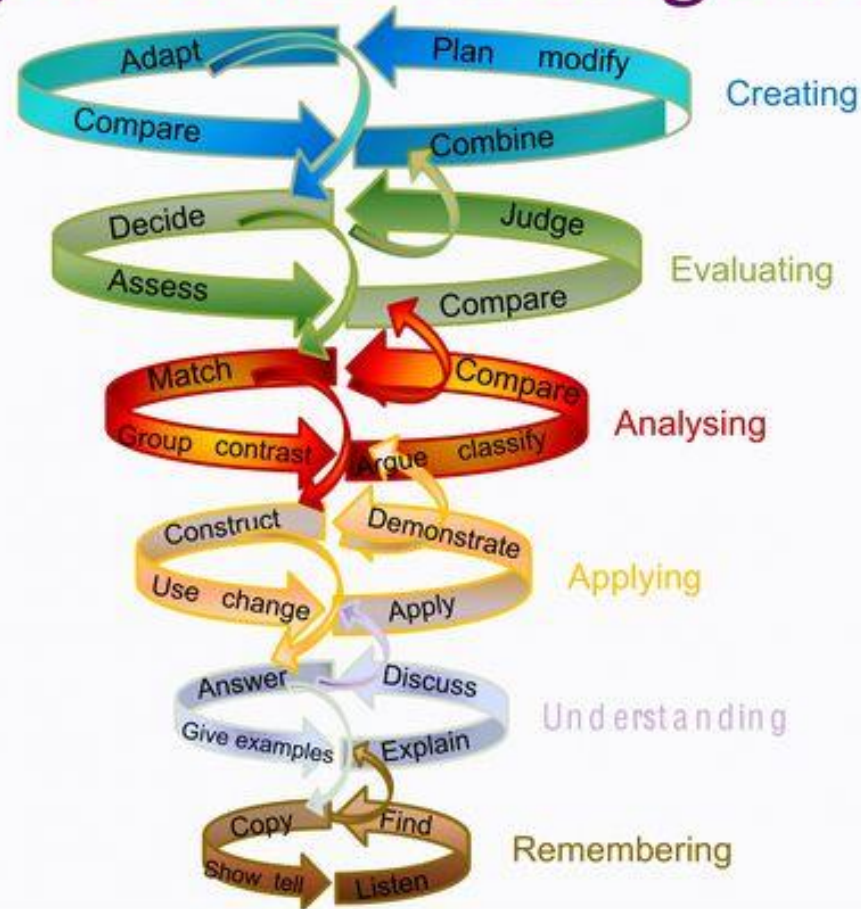
Are you as hard working as you are intelligent?

If we compared the IQs of those who get the most out of their PhD to the IQs of those who fail, we probably wouldn't find any difference. Successful PhD students are not necessarily more intelligent than the unsuccessful ones – they just work harder!



*Hard work beats talent when talent doesn't work hard.
“Working hard beats being smart. Working smart beats working hard.”*

Higher Order Thinking Skills



$$2 + 2 = 2 \times 2$$

$$1 + 2 + 3 = 1 \times 2 \times 3$$

$$2+4$$

$$\parallel$$
$$6$$
$$+2 =$$

$$2 \times 4$$

$$\parallel$$
$$8$$

$$1+1+2+4=1 \times 1 \times 2 \times 4$$

Are you patient enough to do a Master/PhD?



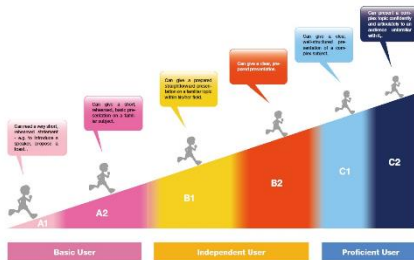
Have you ever heard of the marshmallow test? In it a child is left alone in a room with a marshmallow and is given a choice to either eat it immediately or wait for 15 minutes. Those who wait for 15 minutes get another marshmallow and can eat both of them, however, those who eat the marshmallow immediately there is no second marshmallow... Well, studying for a PhD could be compared to doing the marshmallow test, in that you have to stare at a marshmallow for 3-4 years without eating it! In other words, you need to be able to work on a project for 3-4 years without getting any immediate reward. If you prefer to constantly receive rewards for doing your work, getting a job may be a better option. But on the flip side, when it comes to PhD although patience is a virtue, the final reward is definitely twofold!

Do you have sufficient money?



Is your family or partner supportive of your studies?

Are you willing to learn to read and write a lot?



How is your English?

Definition

Graduate On time (GOT)

PhD

*Not more than **$3\frac{1}{2}$** years (full time)*

*Not more than **6** years (part time)*

Master

*Not more than **2** years (full time)*

*Not more than **3** years (part time)*

*Most postgraduate students thinking they will graduate on time. Unfortunately, it doesn't happen very often. On average, full time students take **5** to **8** years to earn a **phd** degree and **4** to **6** years to earn a **master** degree.*

Graduation Rates for Master's & Doctoral Students

	No of Graduates		No of GOT	
	PhD	Master	PhD	Master
2012	24	80	16 (67%)	20(25%)
	104		36 (35%)	
2013	21	99	9(43%)	22(22%)
	120		31 (26%)	
2014	26	140	13(50%)	49(35%)
	166		62 (37%)	
2015	37	139	17(46%)	32(23%)
	176		49 (28%)	
2016	50	151	8(16%)	42(27.8)
	201		50 (24.9%)	



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What would you rather lose?



*You can only ever obtain a limited amount of time.
Time therefore is infinitely more valuable than
money.*

The clock is always ticking



How many years of fellowship support do you have left?

YOUR GRADUATION

WHEN THERE'S PLENTY OF FUNDING:

OH, YOU KNOW, SOME TIME IN THE NEXT COUPLE OF YEARS...

IT'S NOT THE TIME SPENT ON IT THAT MATTERS, IT'S THE QUALITY!

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WHEN THE FUNDING RUNS OUT:

YOU NEED TO GRADUATE BY JUNE 17, 8:35am.

OTHERWISE WE KICK YOU OUT.

27 February 2017

20

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How long can you delay starting a family or bringing home a real paycheck?



How old do you want to be while still being a student?



How many good jobs will disappear before you have a Ph.D. or Master?



But what about the professors who supervise doctoral work?



Does the clock tick for them enough to motivate them to be realistic about dissertation expectations, to be sure to get comments back on that chapter draft, and to both encourage and prod their Ph.D. students to the finish line?





Grad School
New Year's Resolutions:

- Eat better
- Sleep more
- Get more exercise
- See friends

or Graduate.

pick one



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The best day of your life is the one on which you decide your life is your own. No apologies or excuses. No one to lean on, rely on, or blame. The gift is yours, it is an amazing journey and you alone are responsible for the quality of it. This is the day your life really begins.

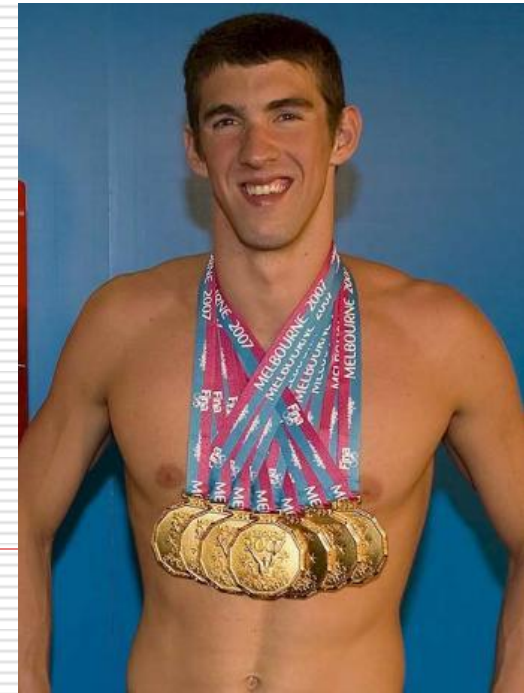
How?

What should I do?

Pre planning



The expert in anything was once a beginner

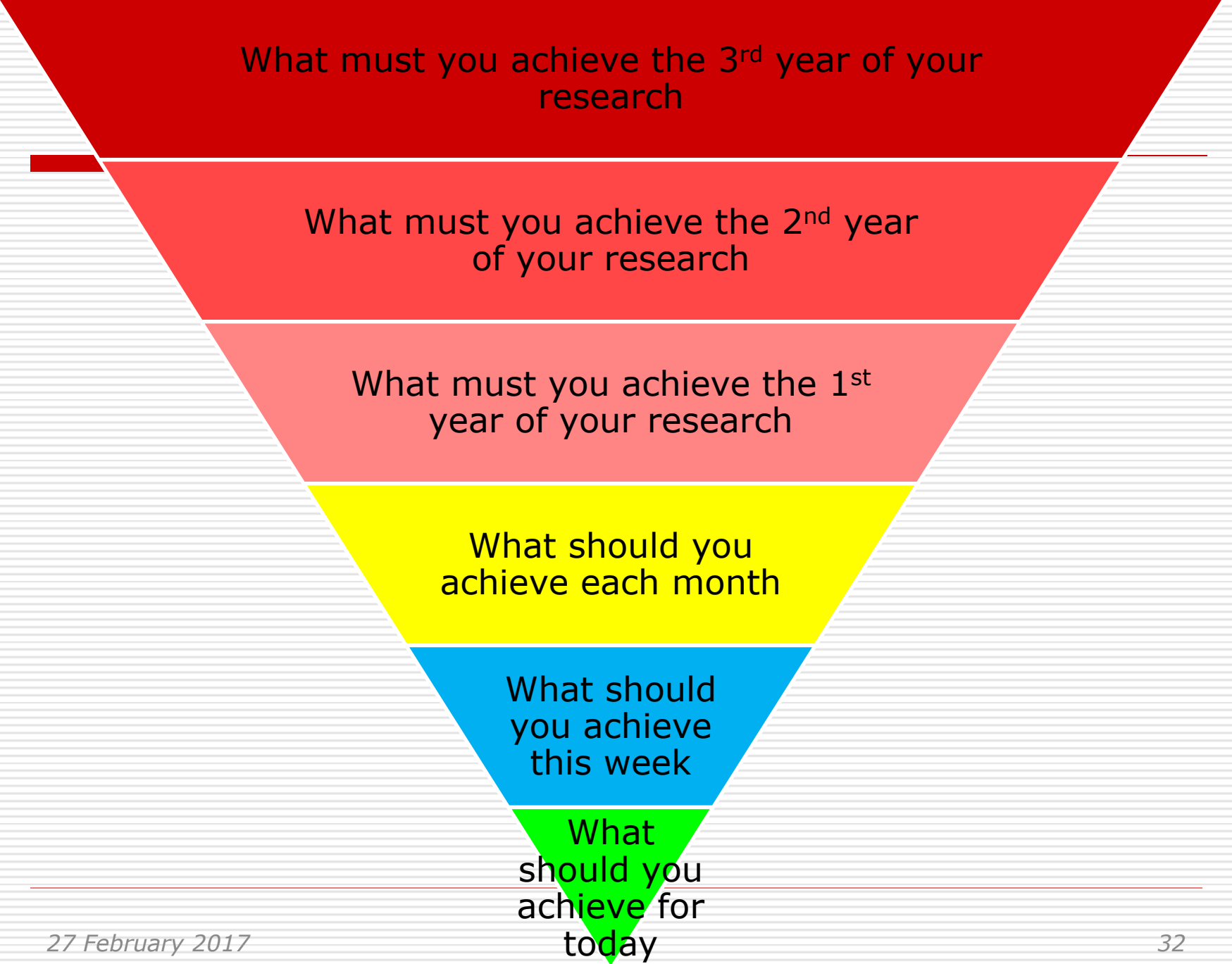


Work hard for the things you want in life. Don't just expect these things to happen.

Don't give up, the beginning is always the hardest. Life rewards those who work hard at it.

Do the planning before hand

- *To clearly set out a structure for the entire work.*
- *To plan the focus of each chapter.*
- *To set a specific time frame for each chapter.*



What must you achieve the 3rd year of your research

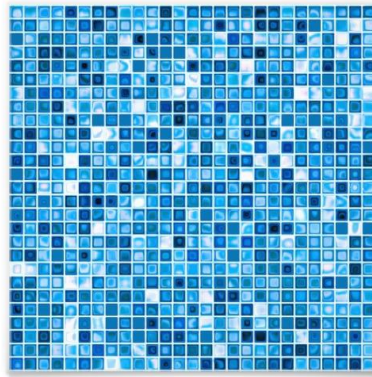
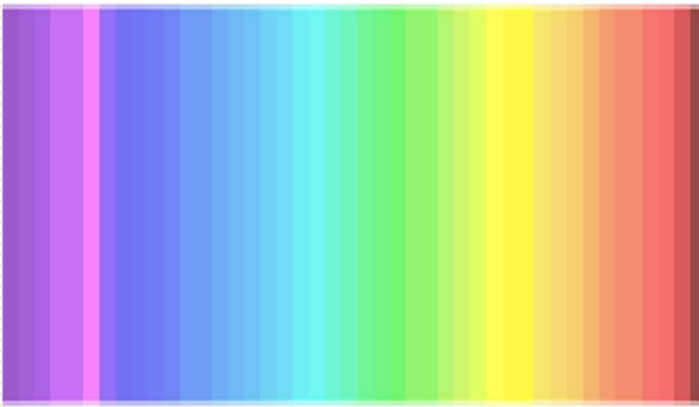
What must you achieve the 2nd year of your research

What must you achieve the 1st year of your research

What should you achieve each month

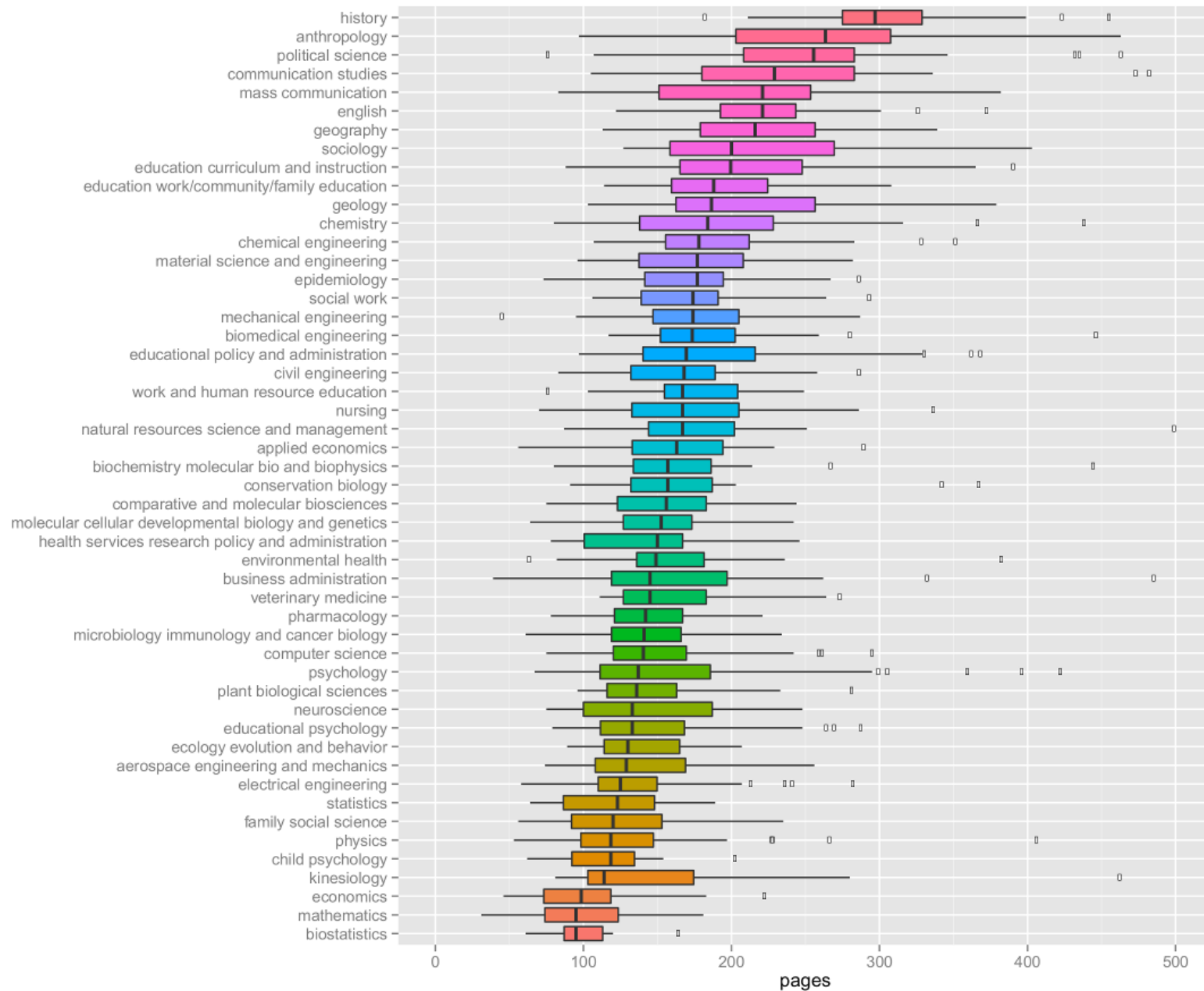
What should you achieve this week

What should you achieve for today

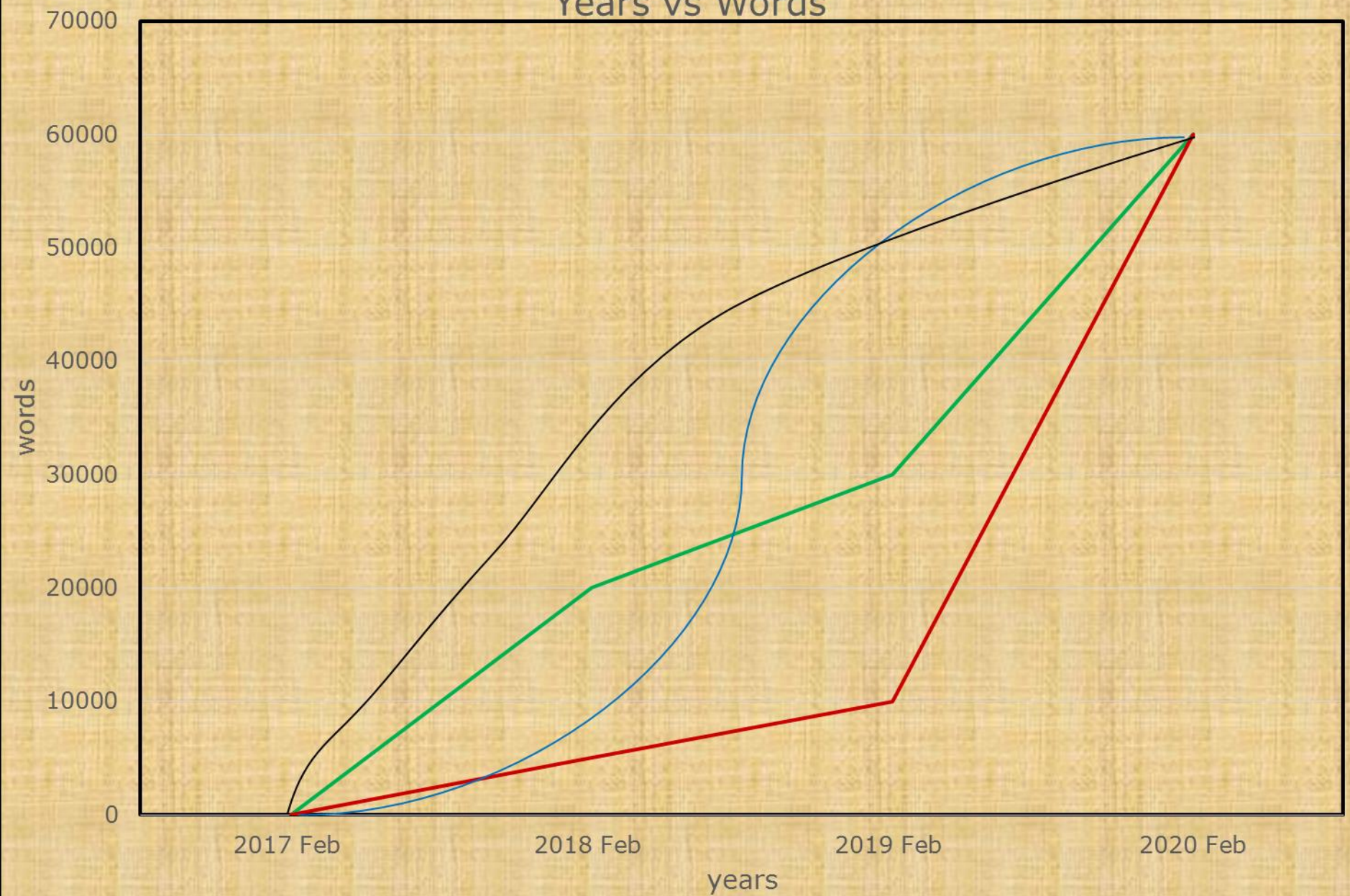


Need to have "realistic" expectations about dissertations, and to factor in the value of getting done along with the value of exploring every possible nuance.

"You have to get to a point in a dissertation where you say it's good enough. It doesn't have to be perfect. It's time to get it done as good enough."



Years vs Words





Pre Knowledge

Know at least something about the topic beforehand.



Read



Write

Interact with others constantly

Reading



Skim over a journal and decide if you should invest the next few days reading in depth.

After reading, you should easily find

- *What is the novelty of the research presented.*
- *It can be useful for your work.*
- *How does it compare to what you are doing.*

Writing:



In academic papers you need to get to the point. You need to be comprehensive and concise at the same time. You need to be technical yet readable. And if your English is no good, you should work hard not to sound like Google Translate.

To Publish Peer Reviewed Articles

Publish or Perish

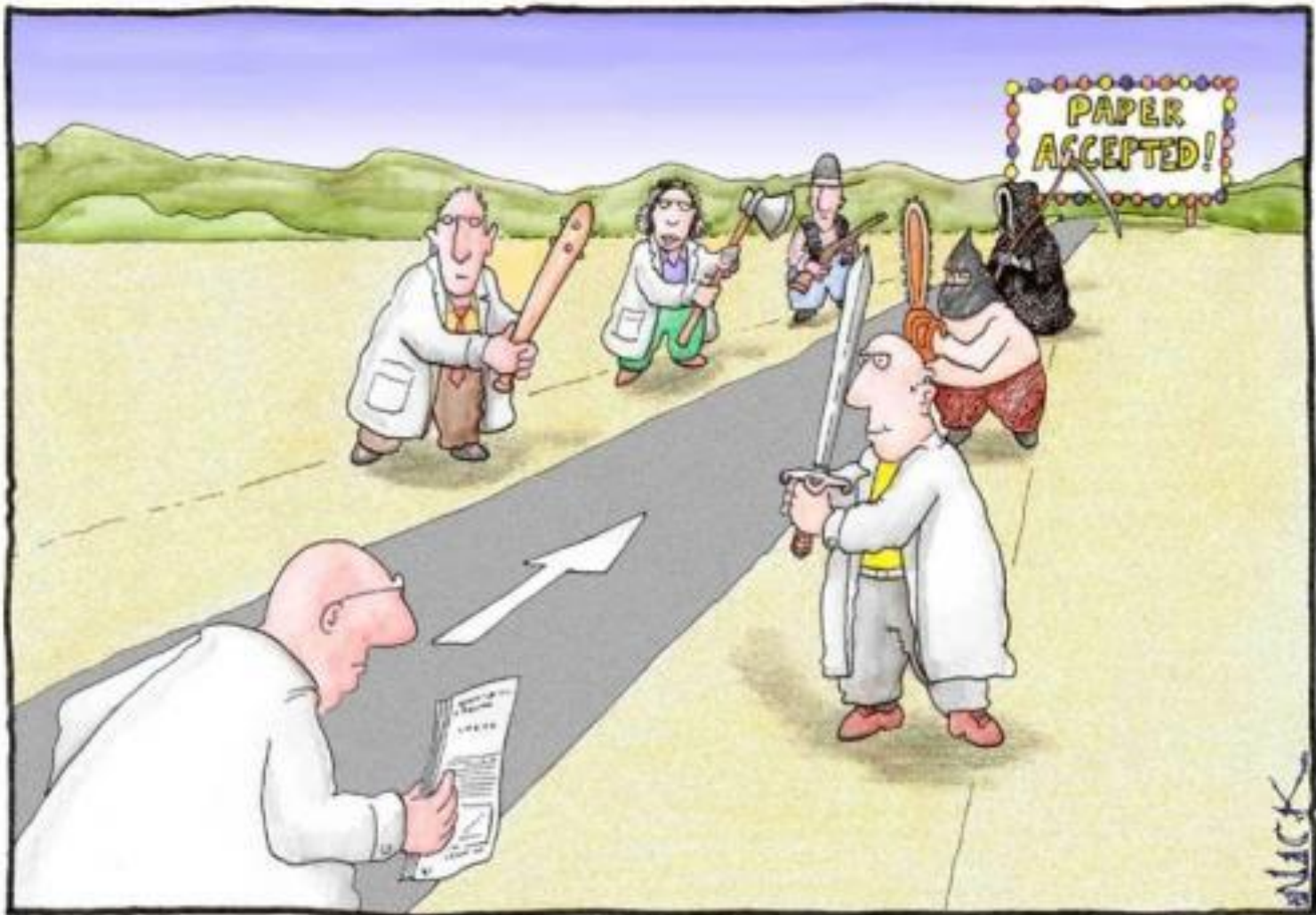
*Being an expert without
peer reviewed
publications equals to
being an expert
without a PhD.*



Oh, yeah, we have that. Its called "do your job or get fired"

We have this thing in Academia called "Publish or Perish"





Most scientists regarded the new streamlined peer-review process as "quite an improvement."

Interact with others

A Guide to Academic Relationships

Same department, different field = Colleague

Same topic, different field = Collaborator

Same field, different topic = Conference Buddy

Different field, different topic = Who cares?

Same field, same topic = Bitter Enemy

(also Collaborator)



Although some researchers would love to work in a cave away from the rest of the community, you should interact with other peers. Interact with others can bring you possible new ideas or comments on your work and increasing the chances of writing more papers.



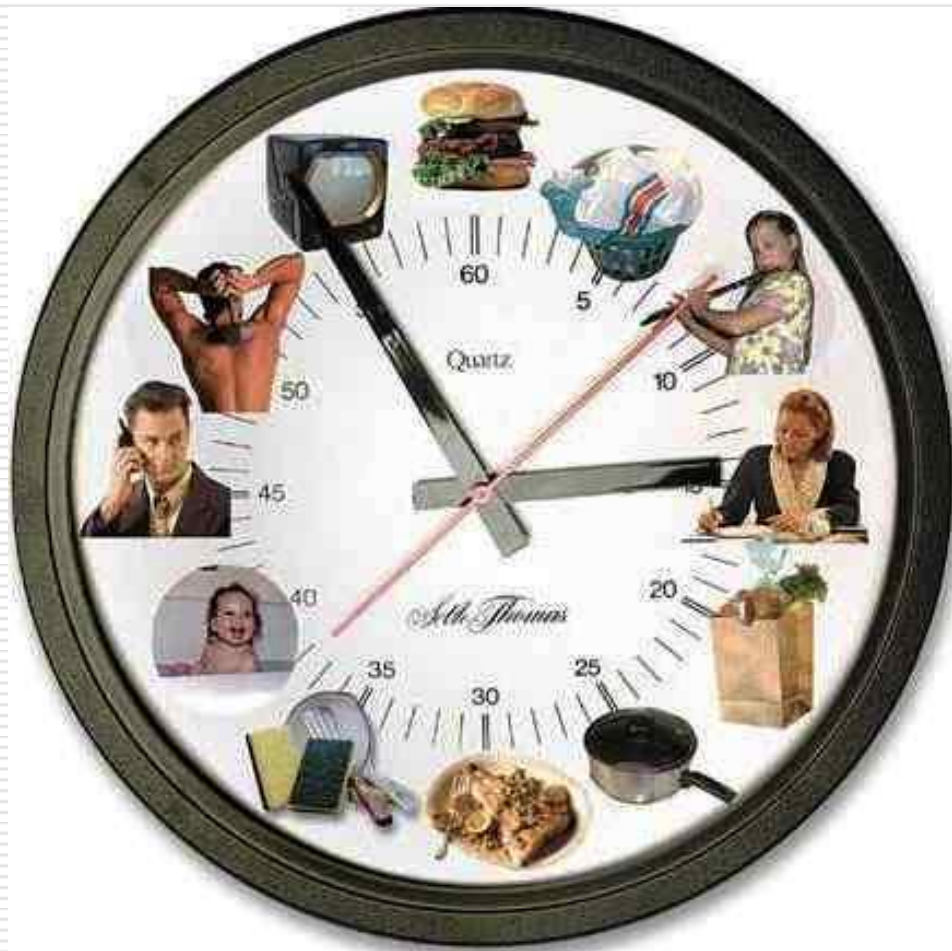
Graduate school has many perks that make it a great experience. You will meet interesting people and you will have the chance to explore your own ideas and to be creative.

Having support and encouragement from friends and family and a good working environment are crucial.

Work constantly

Treat your PhD/Master as though it's a highly paid job in which you are expected to work long hours all the time.

Time Management



*Don't put off tomorrow
what you can do today.*

Pareto's Law 80/20:

Focus your efforts in that 20% of tasks that bring 80% of the benefits (like writing papers). Remove the 80% of tasks that only contribute to 20% of the results (like revising constantly your time management system).

Parkinson's Law:

Set tight deadlines, the last minute rush will activate your creativity. If you decide you can do a task in 2 days, guess what? It will take your 2 days to accomplish it. If you would assign 3 hours to it, you would still finish it.

Have near-impossible goals:

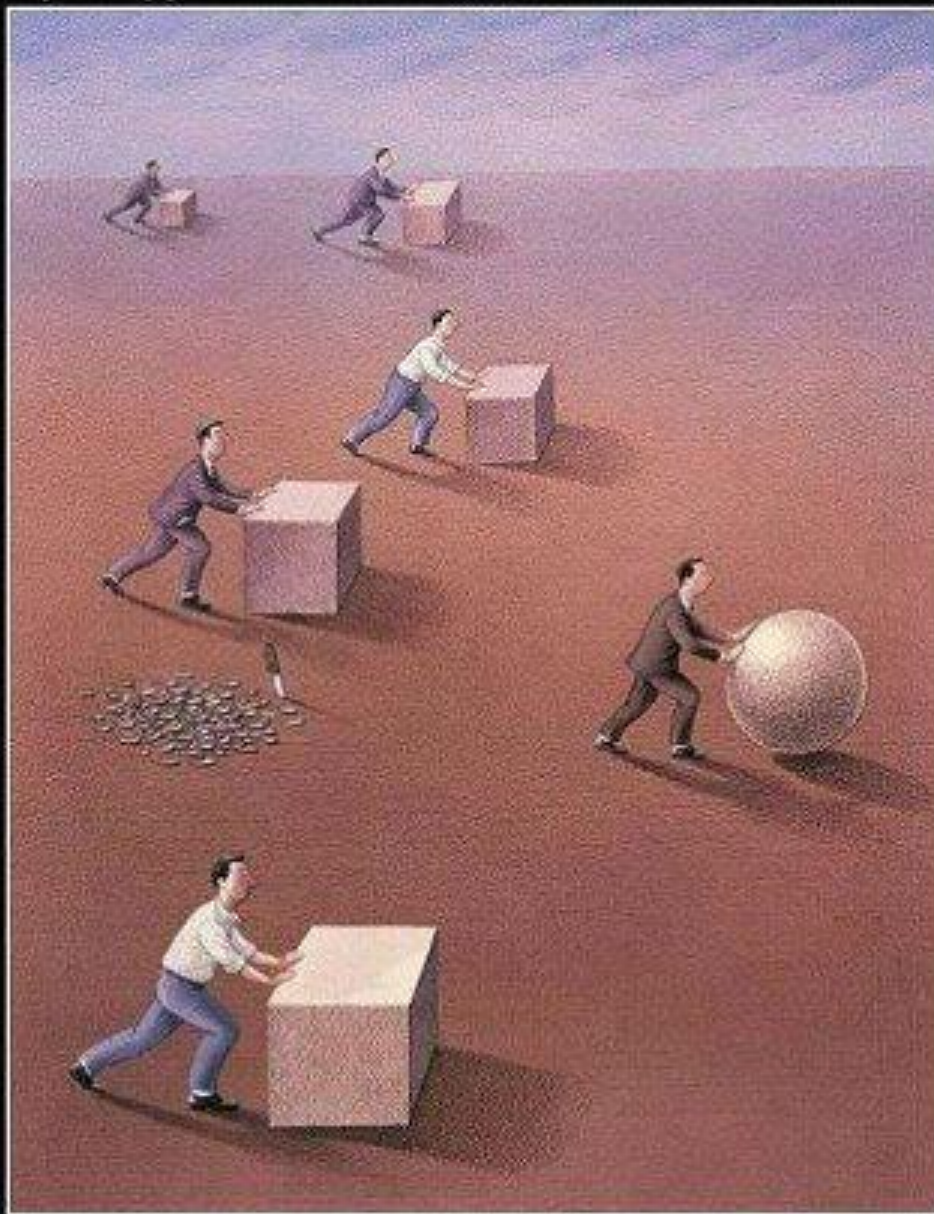
These are the goals that motivate you and that are worth working hard and walking the extra mile. When would you work harder? When you have to prepare a poster for a regional meeting or when you have to give a talk at an international conference in New York?



Don't just work hard, work smart too.

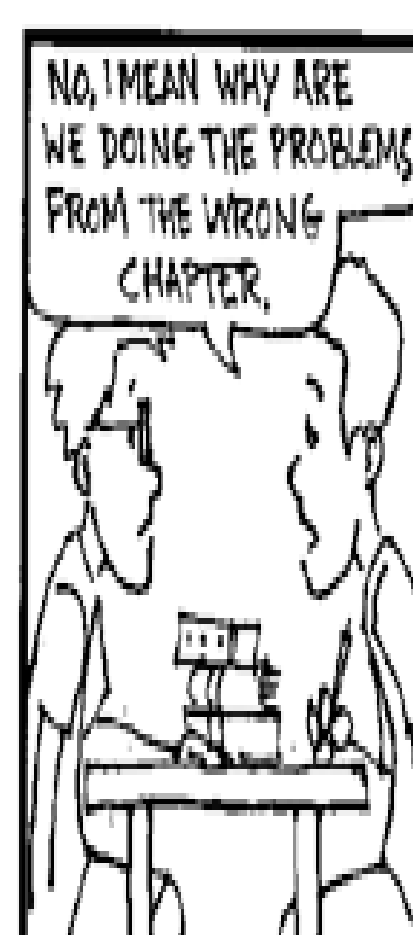
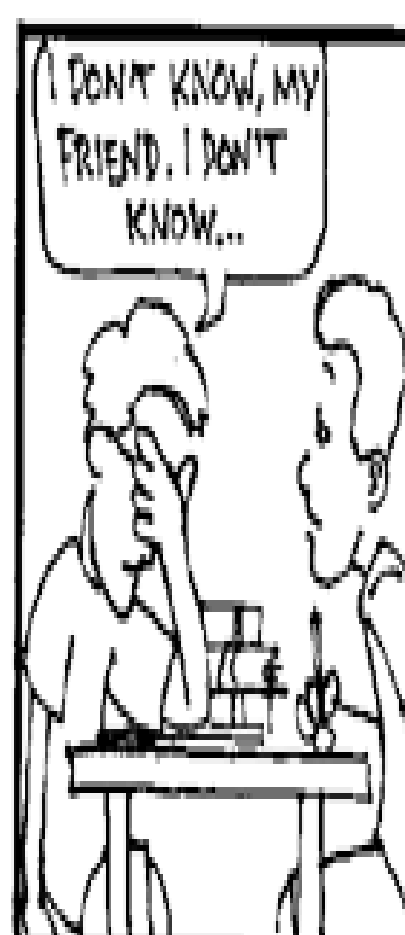
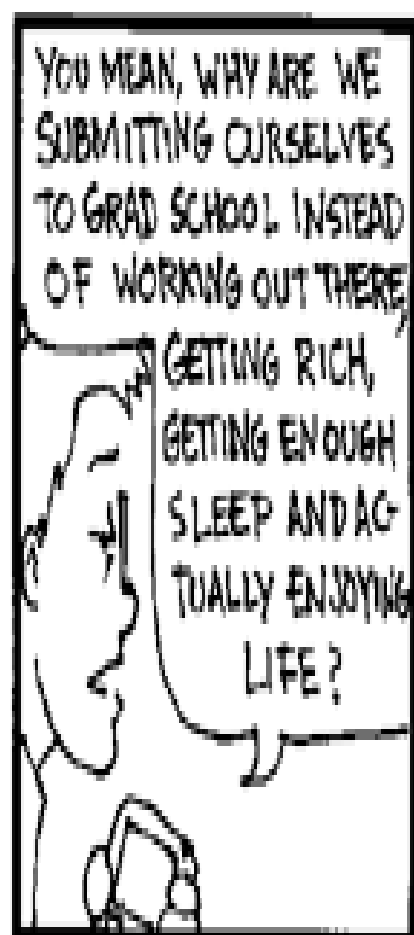
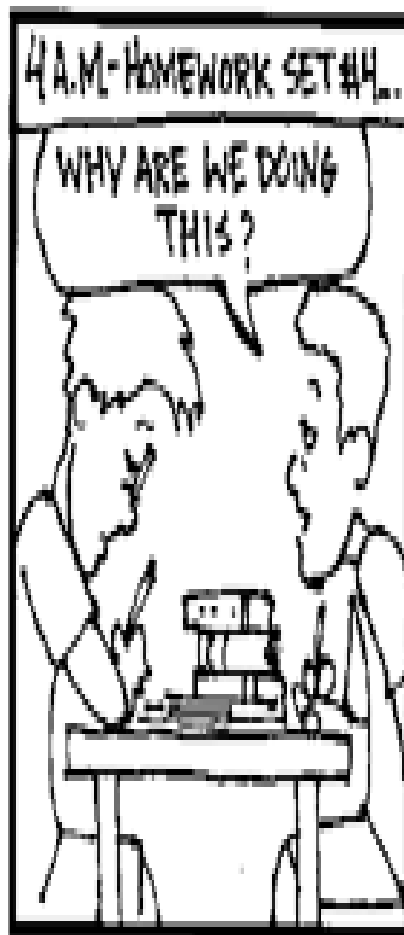
You want to be effective, not just efficient: being efficient at something unimportant is useless. Being effective at finishing important things makes a big difference.

Hard work is the price we must pay for success. You can accomplish anything if you're willing to pay the price.



**Don't work hard
work intelligent**

To stay Motivated



The worst enemy to success is self doubt.



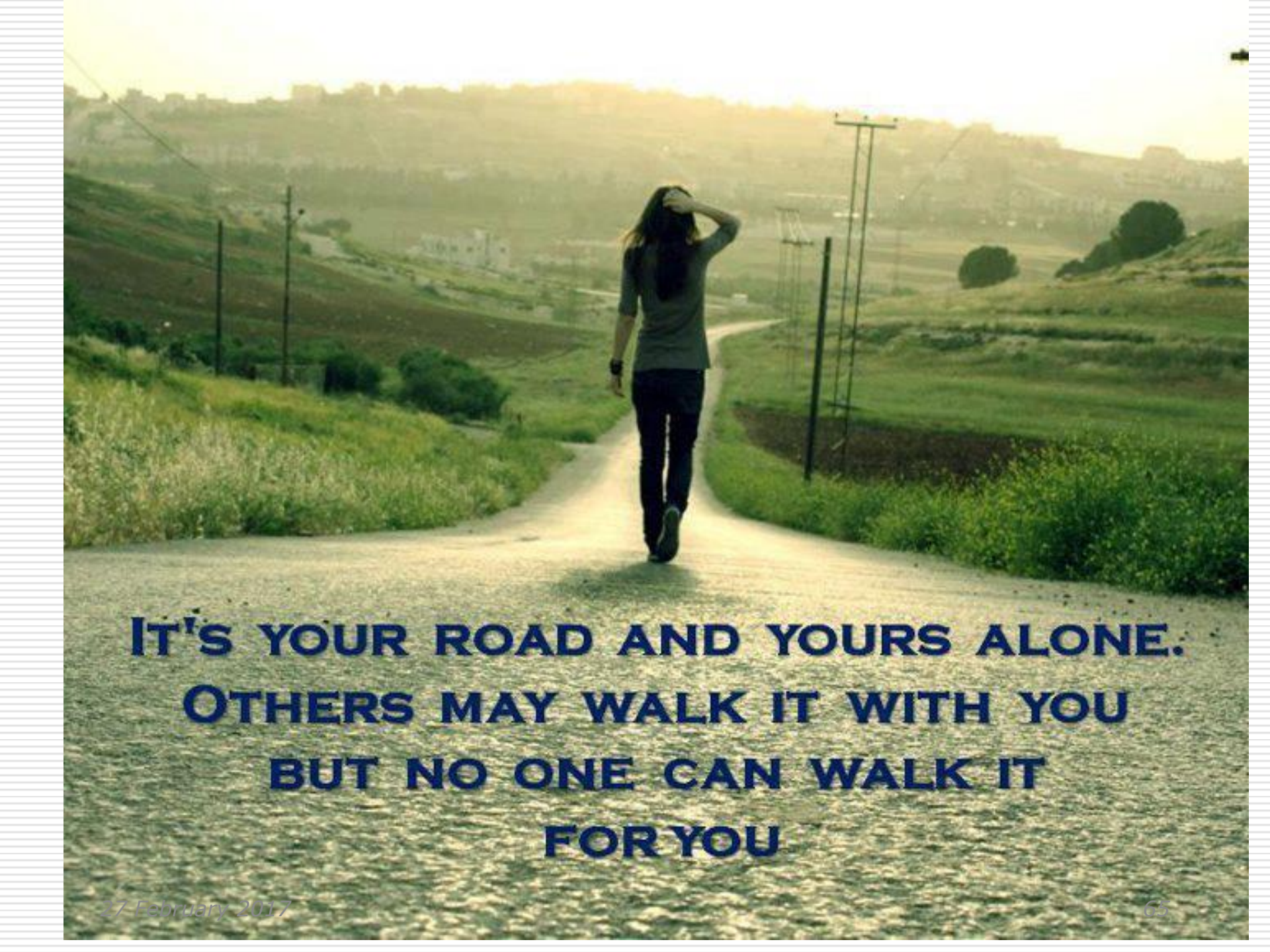
A vibrant rainbow arches across a bright blue sky filled with fluffy white clouds. The rainbow's colors are vivid, transitioning from red at the top to violet at the bottom. Below the rainbow, a lush green field stretches to the horizon, with a dense layer of yellow wildflowers in the foreground. The overall scene is bright and cheerful, symbolizing hope and resilience.

Everyone wants happiness.

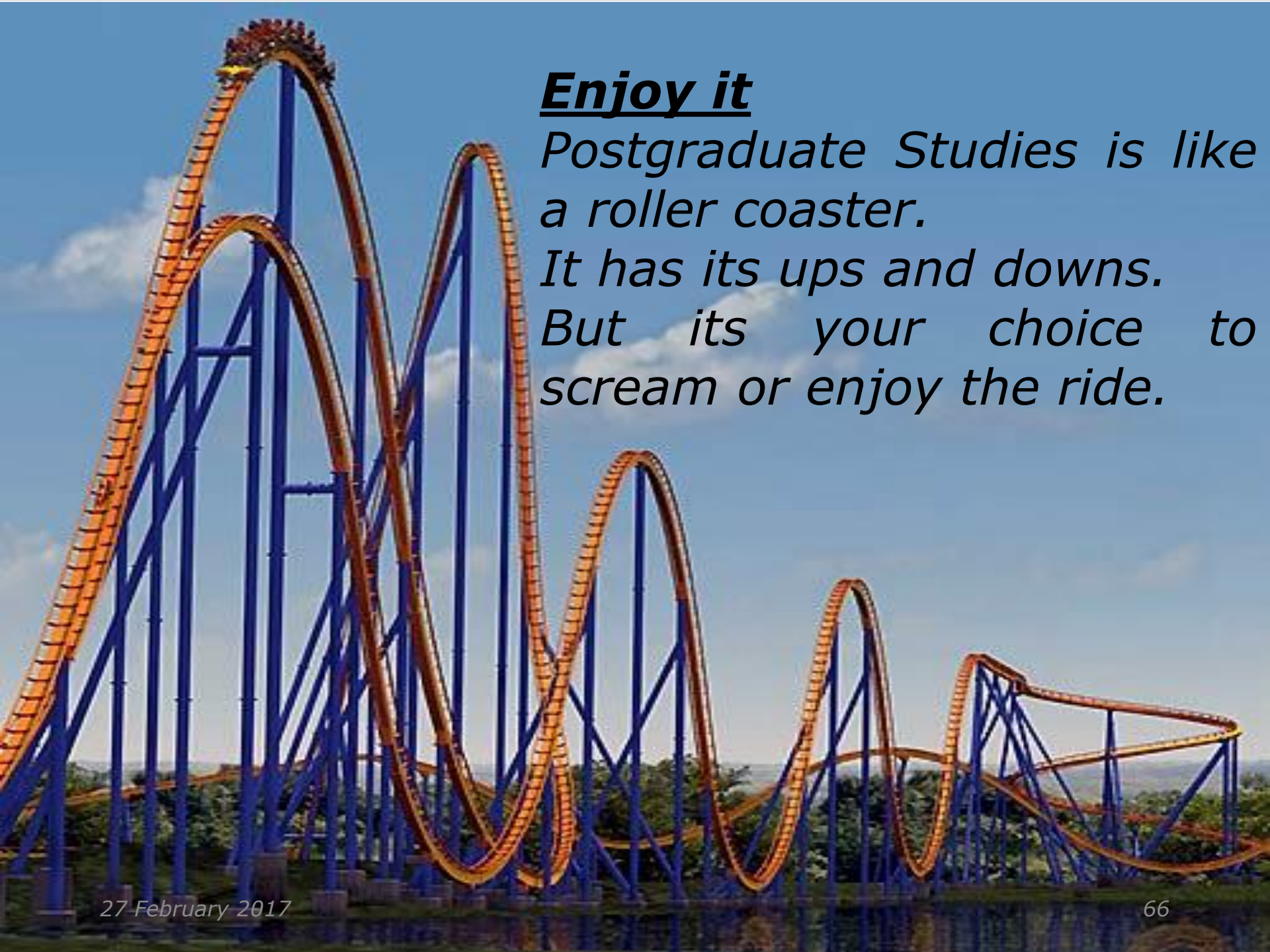
No one wants pain.

*But you can't have a rainbow without
a little rain.*

PhD life is all about self-motivation. Those people who lack sufficient self-motivation will not be able to establish a good work routine, and will soon find themselves sleeping until noon, miserable and/or depressed, devoid of all social skills, and quite possibly with an addiction to tea, chocolate and day-time television. Don't let this happen to you. It is imperative that you treat it like a day job. Set strict working hours and study activities, and if you don't complete them in the time allotted then do as you would as a good employee – work overtime.

A person with long dark hair, wearing a grey long-sleeved shirt and dark pants, is walking away from the camera on a light-colored gravel path. The path curves gently to the right. The landscape is hilly with green grass and some dry patches. In the background, there are rolling hills under a bright, hazy sky, suggesting a sunset or sunrise. A few utility poles are visible on the right side of the path.

**IT'S YOUR ROAD AND YOURS ALONE.
OTHERS MAY WALK IT WITH YOU
BUT NO ONE CAN WALK IT
FOR YOU**



Enjoy it

*Postgraduate Studies is like
a roller coaster.*

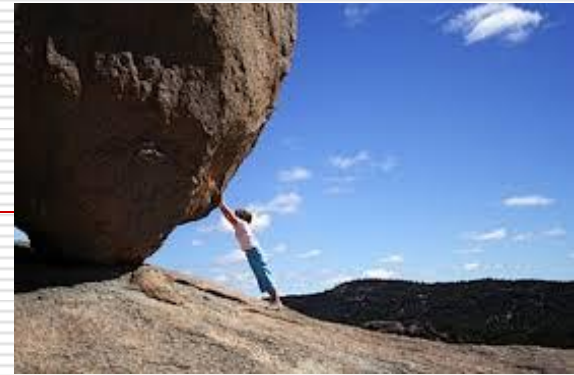
It has its ups and downs.

*But its your choice to
scream or enjoy the ride.*



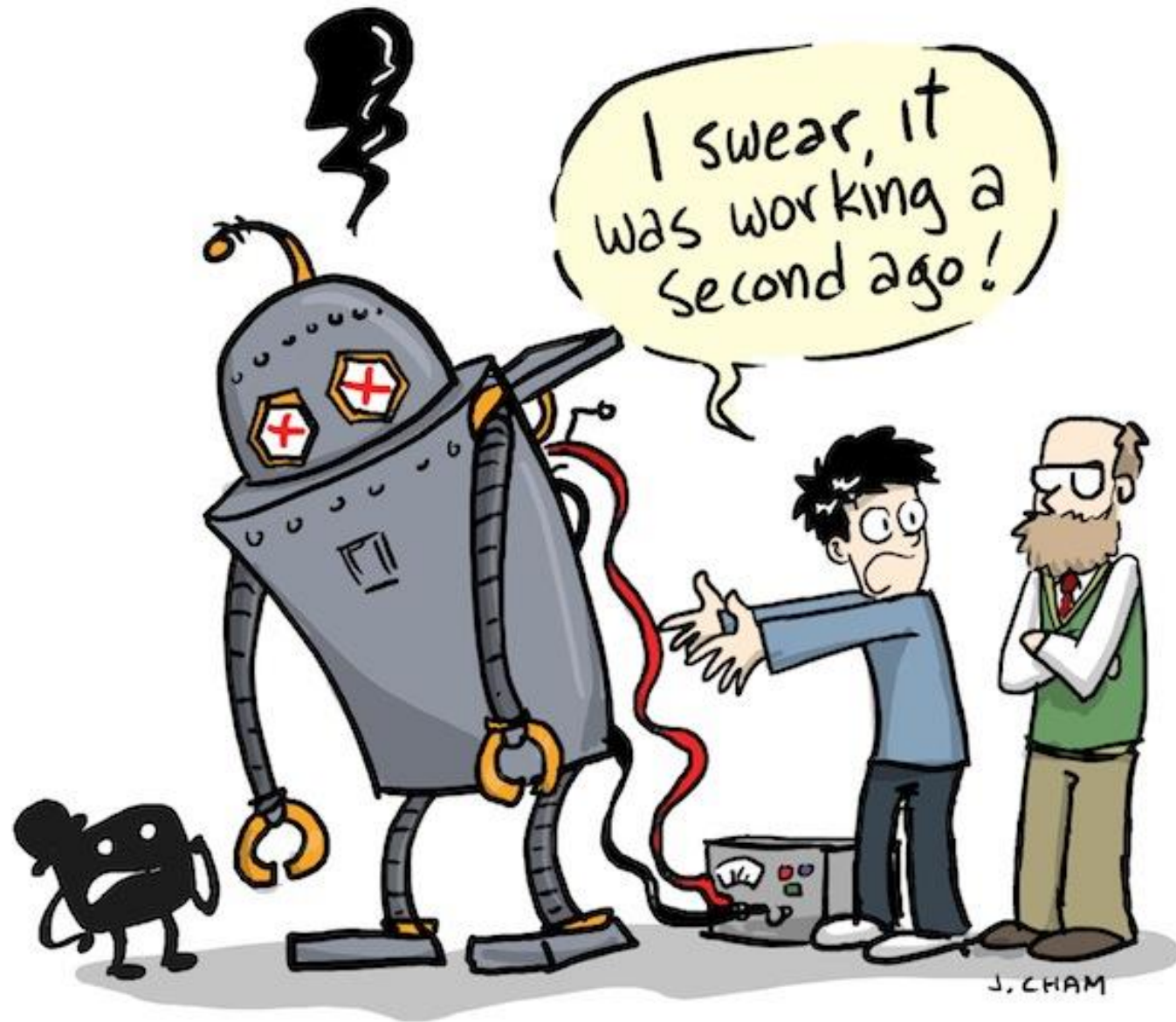
In your postgraduate studies, you will face obstacles and sometimes some people will throw stones in your journey.

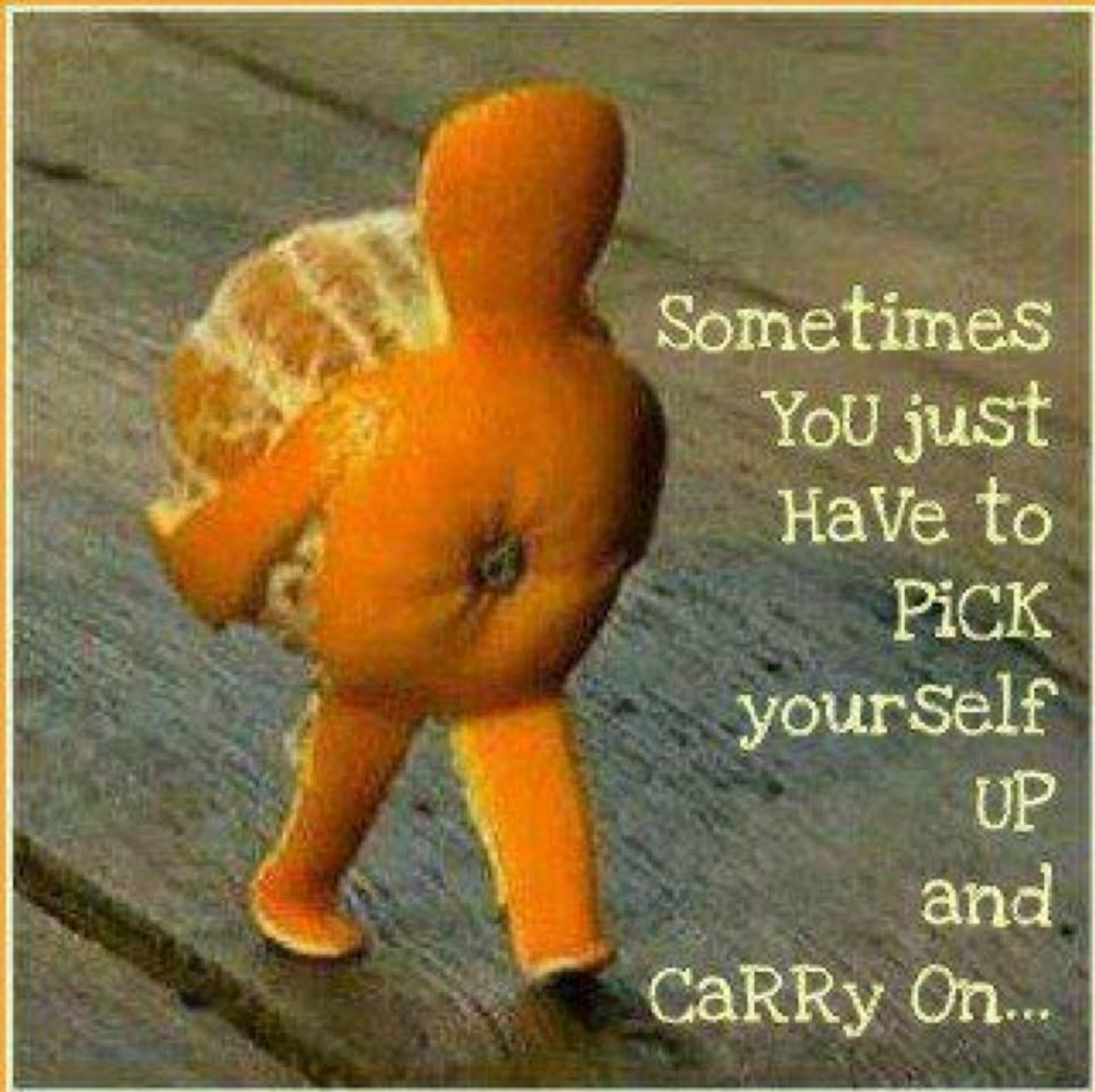




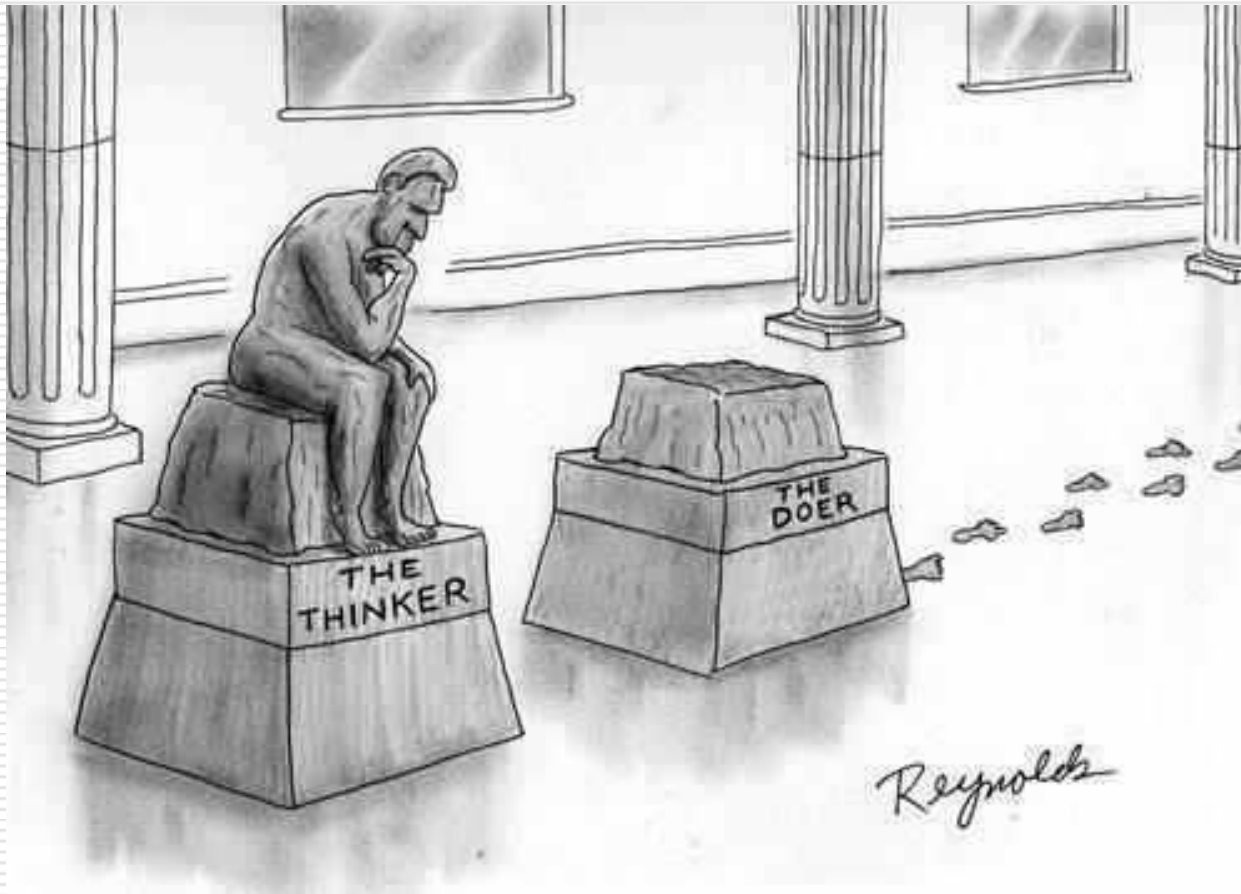
*It depends on you make with them,
wall or bridge?*

*Remember you are the architect of
your study.*



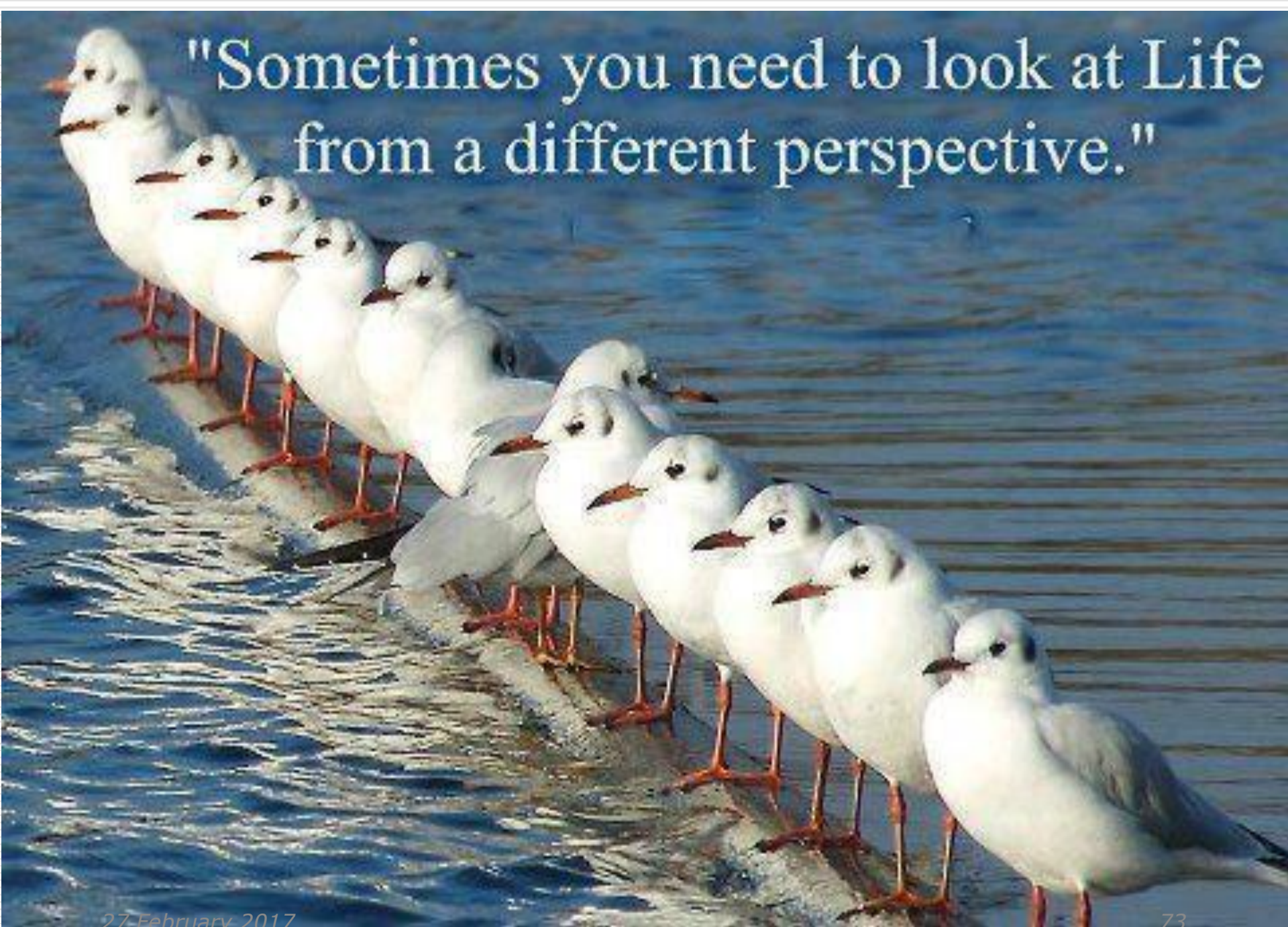


Don't trust words, Trust Actions.



**See thing from different
direction.**

"Sometimes you need to look at Life
from a different perspective."





*Your are not afraid to try again.
Your are just afraid of getting
hurt for the same reason.*

Remedies

Do and Don't



There are some important dos and don'ts to bear in mind

Don't

Don't waste your first year.

It is easy to think that you have a long time to complete your PhD, but don't be lulled into a false sense of security... time has a habit of disappearing fast. Start out as you mean to go on. Establish a strict work and study routine, and stick to it... you are not an undergrad anymore!

Don't

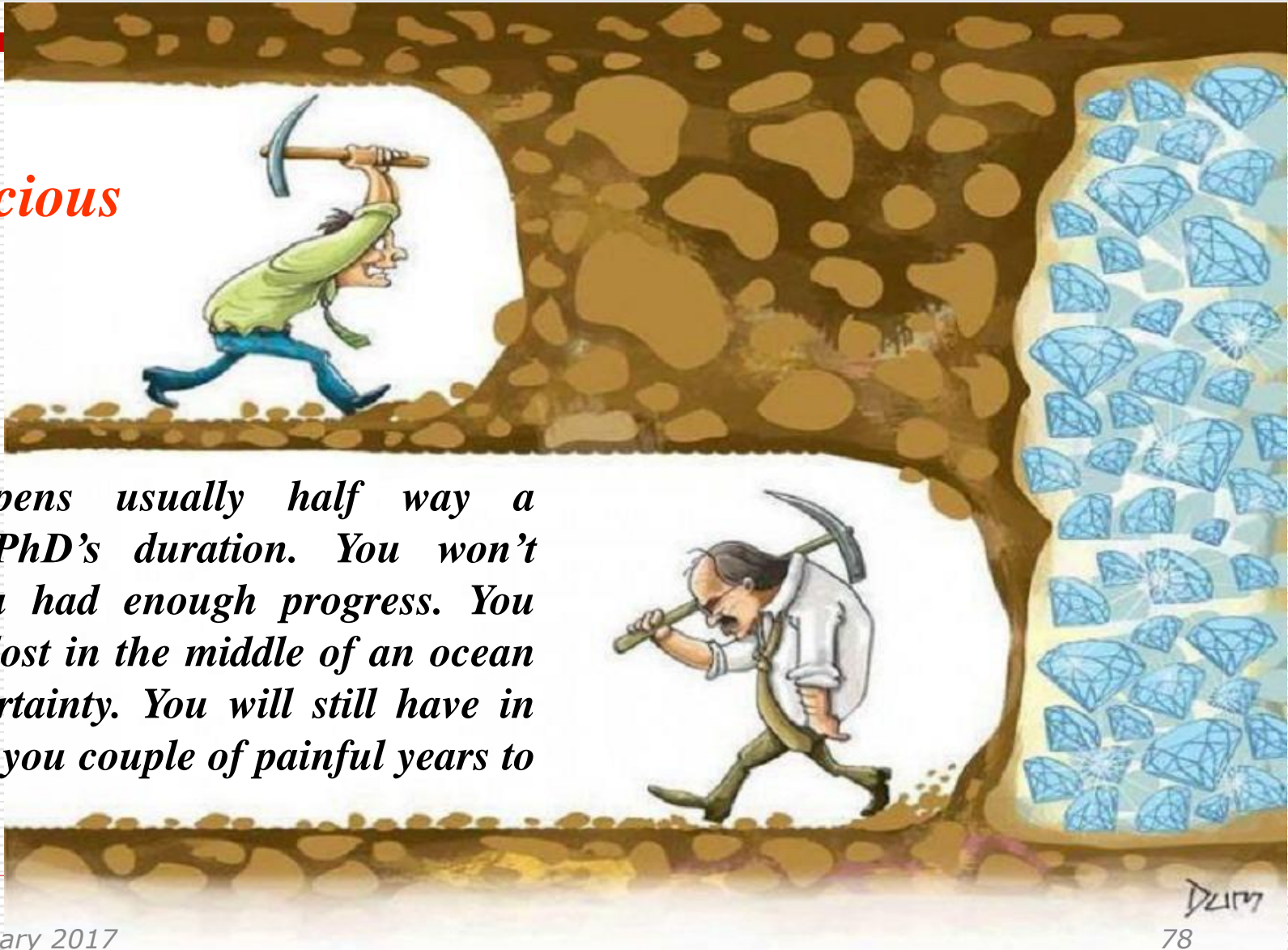
Imagine that you can get others to do your work when it should be your own individual effort to complete the postgraduate.

Do

*Want to see the light at the end of the tunnel
without willing to dig that passage to knowledge*

Be tenacious

*It happens usually half way a
Master/PhD's duration. You won't
feel you had enough progress. You
will be lost in the middle of an ocean
of uncertainty. You will still have in
front of you couple of painful years to
endure.*



Do

Make contacts with Faculty

Do

Struggling each
semester to stay in
the system.

Don't

Too ambitious

Most of researchers make big contributions after a lifetime of research, not in a couple years.

PhD can give you the tools and skills necessary for achieving higher goals.

Don't

aim at "good enough" and "deliver soon" instead of "perfect delivered in a few more days".

Do

Do take every opportunity to practice and learn. Treat your PhD studies like an intensive training program. Listen to and learn from those around you, take every opportunity to try new techniques, present data, meet other scientists etc.

Do *summarise your results as you go*

From the beginning, get yourself into the discipline of writing a monthly summary of experiments performed, results and conclusions and include all lab book references/data/images. The monthly reports will link up to make a story of your research and make your write-up much easier.

Do

Written your thesis as you go along

*You are not just ‘telling’ knowledge,
you’re ‘developing’ it.*

*Write down what you learn, write 400
words a day.*

Don’t leave writing to the very end.

Do

*Making and sustaining
supervisor contact and
supervisory support is
essential, especially when
nearing the end.*

Don't

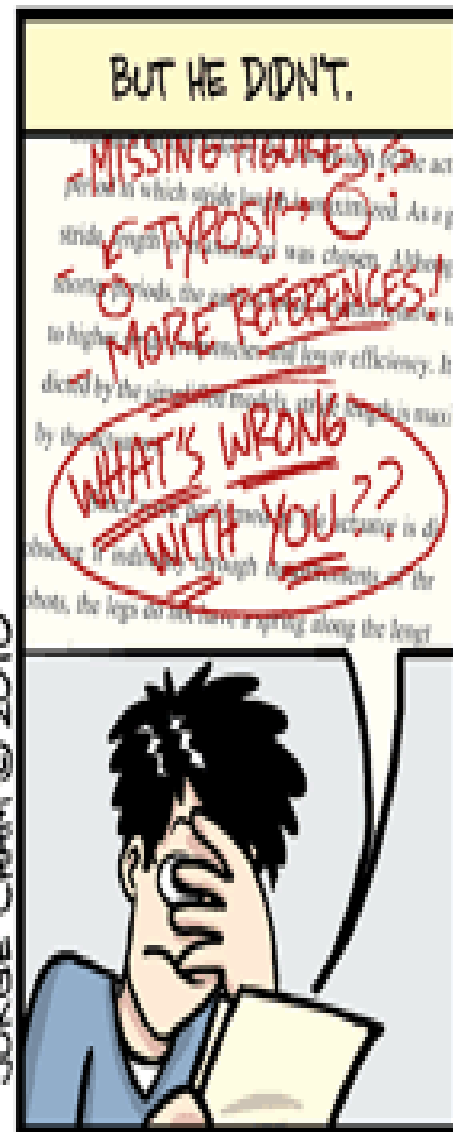
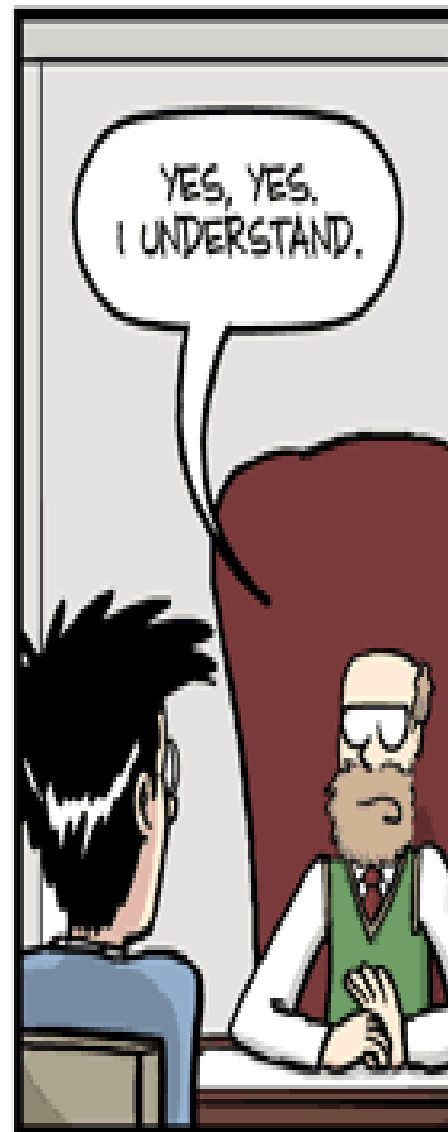
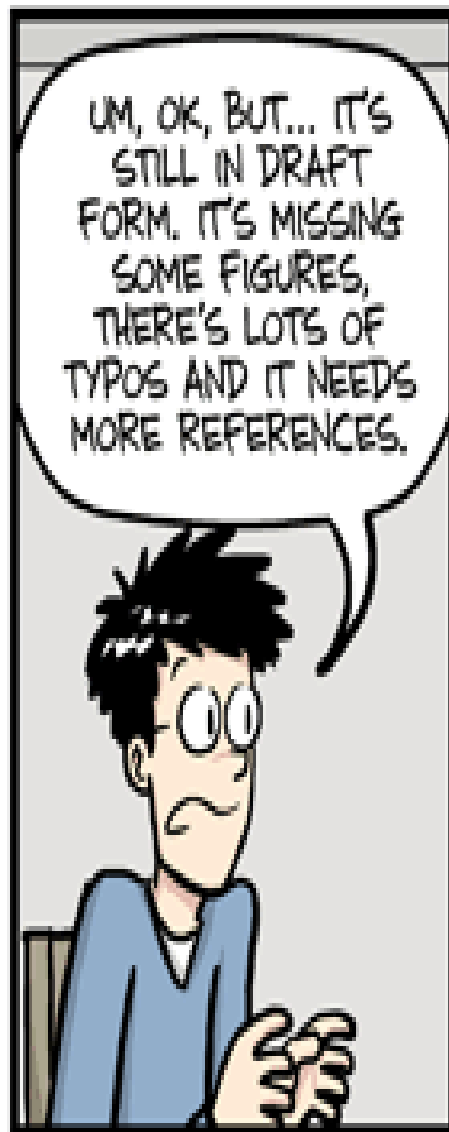
Don't wait till you have the perfect figures or till you are not ashamed of the quality of your work. You need to make progress and you need the feedback of your supervisors to do so.

Do

At the end of your PhD you should be the expert on your topic and not your professor.

You can very well approach your superiors with a problem and propose several solutions. Give arguments for each one. In this context, they might be able to use their scientific instinct, the so called educated guess, to give you a hand.

If you deliver intermediate results or a draft of a paper, you have the chance of getting feedback soon and correct your direction if needed.



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Do

Group study

Start your blog and share with others

Growing your academic footprint.

Do

Explain your research to others.

If you can't explain it simply, you don't understand it well enough. (Albert Einstein)

Do

A PhD/Master student should take care of his online reputation from day 1.

Traditionally scientists/social scientists would grow their network and get exposure by publishing papers and attending conference. In this new world, a great piece of graduate school advice is to take care of your online presence.

Do

There are 3 key online tools that you can use to grow your online presence as a scientist/social scientist: a science blog, Twitter, and LinkedIn, aka the social media trinity for scientists.

Do

Immerse yourself in academic culture and get talking about your research at conferences and research symposia. This will be a valuable confidence boost for your viva.

Do

You have the chance to travel. Get results and present them in conferences. Ask your boss to pay for the trip or apply for a traveling stipend for students. Find collaborators and get them to invite you to visit their lab.



Tips attending conferences

- *Say hello*
- *Stick around after the keynote and you can meet amazing people.*
- *Attending official events makes the entire event possible.*
- *have a question ready*

When you're talking to other people, you're getting new ideas and perspectives. It's refreshing your isolated state of mind."

Do

Publish in a peer-reviewed journal.

Don't

You are scared, so is everybody else:
when talking to other people, giving presentations, applying for that position, it is scary, but everybody else would be scared.

Do

*You should track progress and
correct direction regularly,
don't wait till it is too late.*

Do Online time

The Web is full of great learning resources

Online courses

Intriguing TED

Vocabulary-building tools

Do

Choose a Software

3 Rules Of Thumb To Choose Software For Your PhD/Master

Choose simple software

Forget software with a gazillion functions. Look for simple software. So simple you could use it in a gazillion different ways.

Choose the software your colleagues choose

This makes your life easier when you need to share files or when you don't know how to do something and need to ask for help.

Choose software that syncs your data

Our devices might eventually break down with the risk of losing your precious files. Use software that syncs via Internet your files across devices. Even better, go for those that also store copies in the cloud.

OK, so far so good. You already know what to look for in a software tool. This should save you some time that you could use for real science.

You know what could save you some more time? Getting a list of the software that best fits that criteria and that you will need for sure during your PhD.

Task Management (aka to-do list), Wunderlist

Literature Management, Mendeley
Handling Information Deluge, Evernote
File Back-up / Sharing / Sync, Dropbox
Using Software From Other Operating System, Virtual Box
Writing, Word
Handling Data And Plots, Excel
Slides, PowerPoint
Web browser, Chrome

Don't

Don't get a full-time job, even if you are sorely tempted. However, a part-time job could work in your favour because it could help to structure your time, providing a break from unhelpful spells of isolation and giving you an anchor to the rest of the world.

Don't

*Do not start new job until
you really finish your
PhD/Master.*

Do



Do get a life. It's not all hard work and heartache. Smell the flowers as you go along, enjoy the people around you and make sure you have some fun!



Listen, Listen, Listen

Action, Action, Action

***Do, or do not.
There is no try.***



FOR A MAN IT IS EASIER TO
PICK UP 45-55 KG GIRL



BUT FOR THE SAME MAN IT IS
QUITE DIFFICULT TO PICK UP
14 KG GAS CYLINDER

MORAL OF THE STORY

INTEREST IN WORK MATTERS!! :) :)

*If you really want to do something,
you'll find a way.*

If you don't, you'll find an excuse

Actions speak louder than words. We can apologize over and over, but if our actions don't change, the words become meaningless.

Progress is impossible without changes and those who cannot change their minds cannot change anything.

Forget the Past

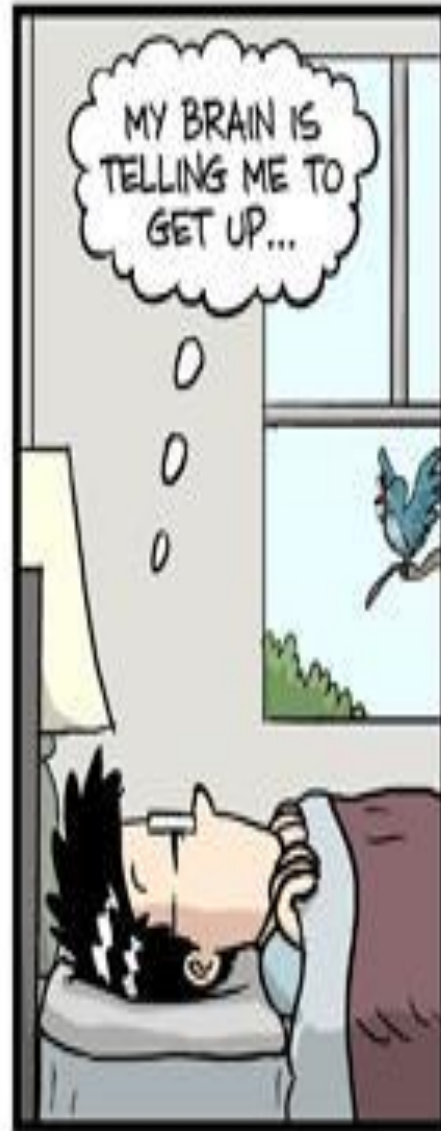
*Stop waiting for things to happen.
Go out and make them happen.*

Slow learners differ from reluctant learners. A slow learner initially wants to learn, but has a problem with the process. A reluctant learner is not motivated and can also be passive aggressive, creating more problems for teachers and parents through non cooperation. Reluctant learners seldom have learning disabilities.

Judge each day not by the
harvest you reap but by the
seeds you plant

Student-supervisor relationships

You need to get close but not too close



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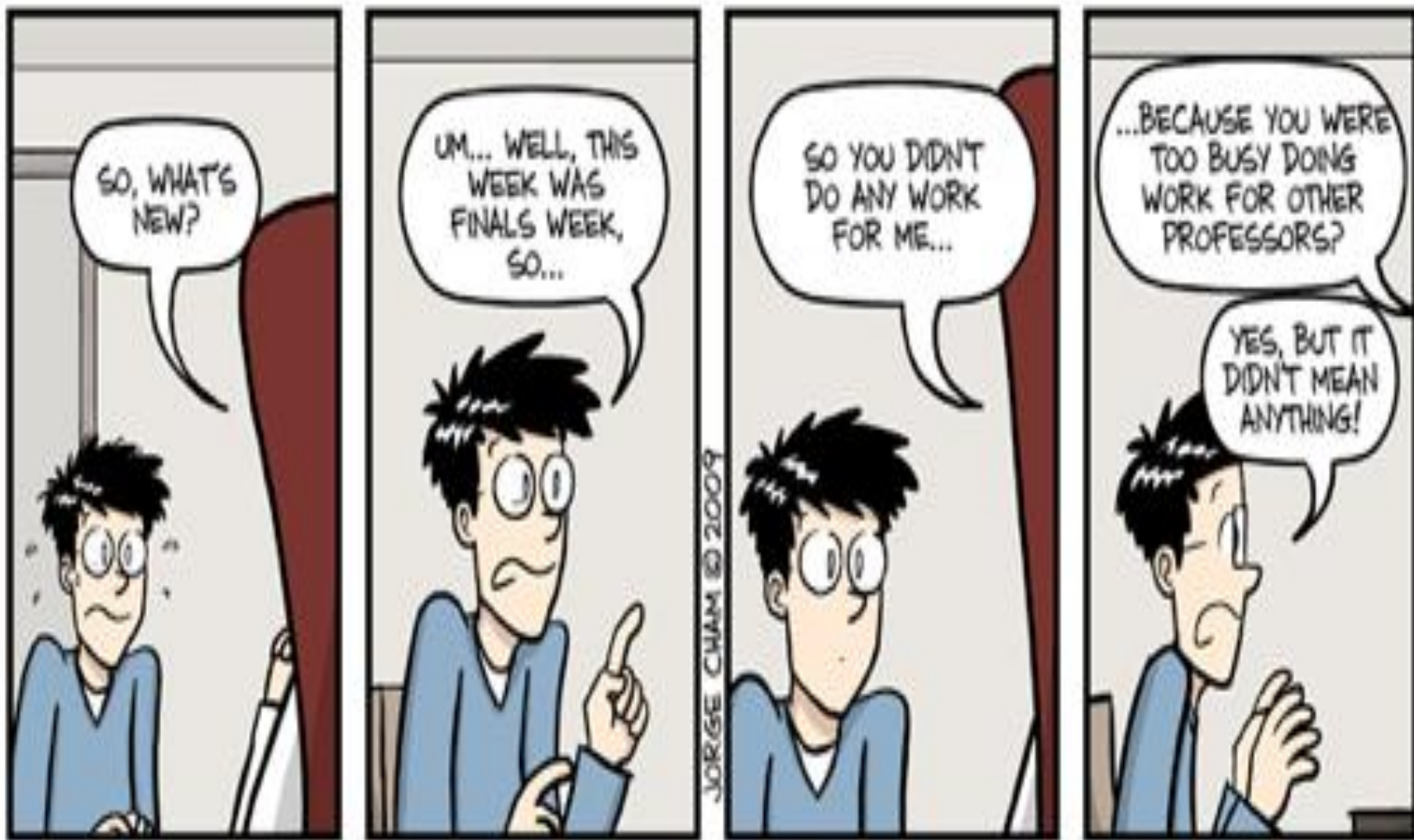
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-
- *Mutual respect*
 - *An understanding of the expectations of the other*
 - *Shared commitment to the goal of the completion of a successful research candidature*
 - *Open communication*



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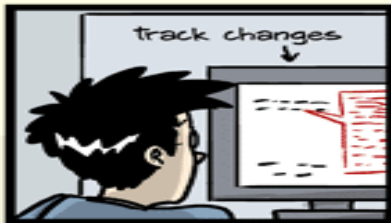
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Successful Dissertations and Theses

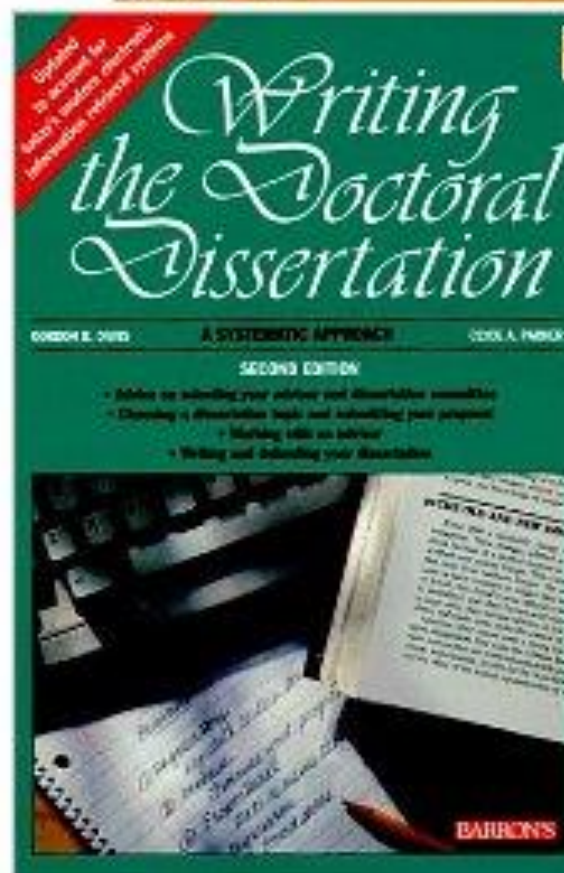
2nd Edition

A Guide to Graduate Student Research
from Proposal to Completion

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Where are you now?

3 things you can't recover in Life:

The moment after it's missed

The word after it's said

The time after it's wasted



WHICH STEP HAVE YOU REACHED TODAY?

*I am **not** the **Best** ,*

*but I am trying my **Best***

$$(107.32 \times 356.97 - 32000 - 1077.5051 \times 4)^2 \div 4$$

