RESEARCH AS A CAREER PATH

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Plan is nothing, ...

Times Square, NY, 6am

Plan is nothing, planning is everything

Times Square, NY, 6pm

- Things to avoid

- Things to try to accomplish

- Soft skills to master

Bachelor at Department X, University Y

Master at Department X, University Y

PhD at Department X, University Y

….

Consider this career path as a dynamic systems.

What can we say about it?

It can be thought of as an isolated dynamic system.
What happens to the entropy of such a system?

The entropy usually grows! Disorder grows...

Avoid getting stuck with one thing!

Bachelor at University X

Master at University Y

PhD at University Z

….

When Richard Feynman graduated at MIT*, the main advice of his supervisor was: **Go and explore the world!**

Diversity and mobility is crucial.

You may wonder: do I really need to go? Can I just stay? The answer is NO.

Already that time MIT was one of the best universities.

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What makes a nation good learners?

But first, how to compare the nations?

	IPhO	IMO	PISA (2013)	PISA (2003)
1	China (96.1)	China (2.1)	Shanghai, China (580)	**Finland (548)**
2	Russia (85.5)	USA (1.85)	Hong Kong, China (555)	**Japan (548)**
3	Iran (81.5)	Russia (1.55)	Singapore (551)	**Hong Kong, China (539)**
4	USA (75.6)	Hungary (1.426)	Japan (547)	**South Korea (538)**
5	Taiwan (75)	Romania (1.35)	Finland (545)	**Liechtenstein (525)**
6	South Korea (73)	South Korea (1.2)	Estonia (541)	**Australia (525)**
7	India (69.4)	Bulgaria (0.98)	South Korea (538)	**Macau, China (525)**
8	Hungary (67.5)	Germany (0.907)	Vietnam (528)	**Netherlands (528)**
9	Australia (58.5)	Vietnam (0.907)	Poland (526)	**Czech Republic (523)**
10	**Germany (57.5)**	**Iran (0.704)**	**Canada (525)**	**New Zealand (521)**

What makes a nation good learners? Cont'd

	State	No. of Universities	Average rank	Population in millions	Weighted rank of universities per million of citizens
1	Switzerland	7	61.57	8	53.87
2	Netherlands	12	53.23	16.77	38.1
3	Hong Kong	4	60.75	7	34.7
4	Sweden	5	59.48	9.52	31.24
5	UK	31	60.11	63.23	29.47
6	Denmark	3	53.53	5.6	28.67
7	Australia	9	61.86	22.68	24.55
8	Belgium	4	55.38	11.14	19.88
9	Israel	3	50.13	7.9	19
10	USA	77	65.6	314	16

Representative nations are the **Netherlands, Hong Kong** and **Australia.**

The striking common characteristic is the deep internationalization of higher education and the ratio of foreign student population to domestic one [12,] reached more than 20% in Australia, 10% in Hong Kong and 7% in the Netherlands. (In the US only 3.5%)

Internationalization and mobility makes nations successful.

Personal stories of successful colleagues suggest that the same holds true for individuals.

T.P. Leung "Development of Higher Education in China Mainland and Hong Kong SAR", European University Association, http://www.eua.be/eua/jsp/en/upload/Panel_Leung.1112699548801.pdf

Ideal carrier path in Sweden

- Bachelor at University X1, Sweden
- Exchange Master at University Y1, USA
- PhD at University X2, Sweden
- International postdocs at University Y2, USA …
- Tenure track at University X3, Sweden
- ERC starting grant
- Lectureship in Sweden or somewhere in Europe
- ERC consolidator grant
- Professorship in Sweden or somewhere in Europe

Soft skills to Master

- Language proficiency (BBC learning English)

- Academic writing (youtube, 'How to write a great research paper')

- Presentation skills (TED talks)

- Time management (youtube , Randy Pausch 'Time managment')

- *Basics* of project management

- Leadership training

- Self-organization & self-motivation

- Foster your grittiness

- Reflect on the things