ONE often comes across articles that point to the weak current research market in India when viewed in the global context. This is primarily because of the limited infrastructure. Being a part of the Indian education system, it is hard for me to negate the above statement. But I firmly believe that the success of every system lies in its vision.

Each year, thousands of students are migrating to different parts of the globe to do research and a percentile bags the top seats of various Indian research institutes at doctoral and post-doctoral level and also as Principal Investigator (PI).

Now, what are the pros and cons of going in for research? What are the criteria for doing research? Some say, good grades matter or good rankings in qualifying exams or good lab/projects or just the scientific insight within oneself. The most unacceptable reason is when one says ‘I am doing research as I have nothing else to do’.

The qualities of a good researcher are deep insight, dedication and determination to see the project through. Anyone short of either quality should avoid doing research. Every year, while there are many great scientists coming out of the labs, there are still a number of researchers dying to survive in the lab and unsuccessful every year.

Here are a few tips to be a part of the PhD life cycle based on my own experiences.

### Reasons for Doing PhD

1. Manage a higher degree over the latest one.
2. Get training to read, write and build up technical knowledge in a specialised field.
3. To reach a specific research goal.
Some Advice Before you Start

1. Ask yourself as to why you are considering a PhD.
2. What after PhD?
3. PhD is lonely, frustrating at times.
4. No fixed working hours.
5. History of past academic success won’t cut much ice; before starting a PhD you are again at the base of the ladder.
6. Entertainment is a part of research life as our brain consumes more energy than the physical body in a given time.

The Supervisor

1. Update him with your progress.
2. Get his constructive and critical feedback (If he pushes you hard, realise that it is for your good only).
3. Keep appointments with your boss.
4. If you disagree with his views, try to support your observation with good back up and logic.
5. Talk one to one and never disappear in fright and realise that your boss is a human being irrespective of his emotional status.
6. Never try to go beyond your boss as whatever may be the reason, he is your boss and you are employed in his lab.
7. Maintain a strict professional rapport and keep in mind that lab dinner and lab retreat are not to be confused with personal gatherings with your PI.

Lab Mates

1. Treat your lab mates as your professional colleagues even when one is your next door neighbour.
2. Respect the shortcomings of your colleagues as he/she is a different person.

Try to criticise your own work and frame questions you might expect. Your breadth of knowledge will help you to answer your questions as there is no single text/syllabus for your success. Realise the fact that your examiners are experienced and know more than you and you know everything about your work.

Originality of Research

Your goal or project must be something never repeated before. Be sure that you need not be a rocket scientist or bag the Nobel to be original.

Writing and Reading in Research

This is an essential part of research and success in this can only be achieved by practice. A good reading and writing habit will enable you to publish well. Read previous reports connected to your research. Write your proposal or thesis within the prescribed rules and format. It is good to go beyond your area of specialisation. There is no harm in increasing the breadth of knowledge as that helps in critical analysis. Be aware of the fact that criticism in research does not mean to look down upon your fellow lab mate’s work because his lab is smaller or he borrowed chemicals from your lab. Criticism should be based on firm scientific logic.

Always write and proofread your article before submission. Remove unrealistic details and replace long sentences with short ones. Read innumerable papers to excel in your writing style (Never say you read the paper by reading the abstract or copy-paste sentences from your favourite reviews).

Presenting or Defending your Work

Always do mock presentations before you approach the final event. Try to criticise your own work and frame questions you might expect. Your breadth of knowledge will help you to answer your questions as there is no single text/syllabus for your success. Realise the fact that your examiners are experienced and know more than you and you know everything about your work. So, don’t be afraid but never be overconfident.

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