

Description

The decision to undertake a PhD program is a long-term commitment that requires substantial planning. The source of funding, area of specialization and the intended outcome are often in focus at the start. Navigating through a PhD is frequently compared to a journey in an unchartered territory, compelling clear direction during the first three months. Rational thinking and resourcefulness will enable smooth progression from one semester to the next and completion of your study in a predecided timeframe.

Read Before you Begin

The PhD experience sets a steep learning curve and the best way to engage academically is to start by reading. Read the background literature, maintain information flow in the field of specialization and gradually form your opinion or overview. To narrow down the area of research, start reading previously published information in the field, available via <u>digital repositories</u>. Preferably, start with the thesis and research publications of a preceding PhD researcher from your own group. Do not be overwhelmed by previous publications, however, as you will have a timeline to accomplish the tasks logically. A <u>strong</u> <u>support network</u> and reliable supervision is crucial to ensure long-term stability in PhD and in academic career. After substantial reading in the first few weeks, meet your supervisor to organize a three-month plan for your PhD research. Keep the initial research structure simple and open-ended for improvement based on feedback. Outline a basic plan of work, based on the literature you reviewed. Share your independent opinion matters too. Free templates and planners are available on several websites to aid a constructive research flow, use them to think well.

Write your opinion

Academic writing that follows substantial reading on and related to the area of interest, defines the PhD research process. A <u>literature review</u> of research, based on the journal articles you read and the concepts noted, will complement the initial reading. The <u>literature review</u> is usually short but informative, well researched and supported with citations for accuracy. Get acquainted with referencing software such as <u>EndNote</u> and <u>Mendeley</u>. Depending on the research program, the literature review may be publishable in a journal aligned to your research field. Verify eligibility for this with your supervisor, or express your interest to publish, and then follow-through with the journal guidelines.

Guidelines for authors are available on the journal's website, detailing requirements for academic writing; adhere to them from the start. At first, the academic research writing process will be daunting and will require many revisions. For clarity, keep a folder of drafts, to file major revisions and then write regularly on a daily basis. Alternatively, maintain an external writing platform, communicate your research and incrementally post your opinion. You would be surprised by the level of clarity the routine would present to your thinking process over time.

Think before you proceed

As a graduate PhD researcher, you will bear much responsibility for your research work and writing. Be aware of the impact you have on the study outlined, take time to think through your research ideas and proposed methods. Ensure the work outlined for the first three months is reproducible, based on previous publications to avoid wasting research funds. Collaborate with your peers and other researchers prior to ordering equipment and reagents for your work. At the start of a project, the outlook will be overwhelming when viewing the bigger picture alone. Set aside time to think through the proposed work before you actually conduct it. Most labs have an ordering system and an invoice procedure. Become familiar with these before placing your first order. Plenty of online resources that facilitate workflow in research are now available, including web-based lab inventories to online research assistance. It is never too early to improve your research experience. The overall outcome would make for an interesting thesis publication of your own, so think first and work accordingly.

Optimize and repeat

In the first three months of your PhD, you will most likely realize the intensity of experimental work. Bear in mind that even with adequate supervision support, you remain the researcher solely responsible for your own work. So do not be afraid to enjoy the research process as your own ideas unfold into practice. Read extensively before you begin the work. Make notes and write a short literature review to recap your opinion on the area of interest. Later when you complete the first experiments, read supporting literature again to validate any unexpected results. Ensure reproducibility of research protocols by conducting repeatable experiments in lab. Use resources constructively, even procrastinate productively with science networking, research updates and by co-creating/viewing interesting PhD documentaries online. Outreach efforts on broad platforms via writing or speech can contribute to career progression as a PhD researcher. Overall, the first three months are a preview to the long-term PhD process. The preview is a timeline of reading, writing, thinking and repeating the process with innovation, for an optimized, long-term outcome.

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