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The words Ph.D. or Doctorate spell magic! An aura is definitely attached with Ph.D., popularly known as Doctorate, the degree that entails you to prefix Dr. before your name.

Ph.D. is the highest degree awarded in academics. It can be done in all streams of education where Post Graduate Courses are available. People have many perceptions about Ph.D. like - it is just a collection of information, writing thesis, very expensive, time consuming and just a degree in academics. Some also have reservations about the support of a Ph.D. guide. But does that mean that it is an unreachable star? No! Not at all!

Reality

Systematic and planned efforts in focused directions are necessary to achieve a Ph.D. The basic rationale of a Doctorate course is to discover and to add into the knowledge axis already existing. In education streams like languages, history, and archeology, there is ample scope to discover new dimensions of existing facets.

Ph.D Fundamentals

It is a well-received fact that Ph.D. is a research. There are two types of Research.

Basic or Fundamental Research is

Ph.D.: Exclusively for knowledge searchers



undertaken to originate a new theory or append the existing theory with new dimensions. It is undertaken out of intellectual inquisitiveness, not to be applied in practice.

Applied Research is meant for testing the known theories for finding solutions to a real life problem on which action or policymaking depends. Researchers can select any of these for Ph.D. research.

General steps for starting Ph.D.

- Selection of Guide and Topic
- Preparation and Submission of Research Proposal
- Presentation of Research Proposal before Viva-voce Committee
- Modification/Acceptance by committee
- Start Actual Research Work

Making a proposal

The research proposal is the most valuable document to be prepared with utmost care, a blue print of proposed research work. Since it is a prime document, let's pip into it.

Researcher indulges into a specific subject area. It is expected to identify the gap between what has been done and what can be done with the help of books, journals and websites. This gap is used to formulate research problems. Concurrent problems faced by the industry can be taken for study. The next step is restating this research problem in the form of a research statement for analysis. A researcher has to decide a specific way to study or tackle research problems and state it in a statement form. Hypothesis is a skeptical assumption about desired results, which has to be tested. Objectives of the study depend on research problems and the scope of research describes its utility on the magnitude of application.

Research methodology contains a framework of data required for analysis to suffice set objectives for research. It contains data sources, techniques of data analysis, data collection method and sampling plan. This is the crux of a research proposal.

After getting a formal accord from the university, the candidate is registered as a Ph.D. Scholar. A time limit for submission of thesis is minimum two years to maximum 6 years from the date of registration as a Ph.D. Scholar. A formal permission for extension has to be obtained from the University, if more time is required.

A thesis is checked by referees who are qualified and experienced members on the university panel. After getting an acceptance from the appointed referees, the researcher has to present research and its outcome before a viva voce committee of learned members from the university. The researcher has to tackle all the queries regarding research raised by this committee and the audience.

Basic requirements

To judge the candidature for Ph.D., both personal aptitude and educational qualifications should be considered. The candidate should have patience and passion for work.

Persuasion, pervasiveness and ability to think deeply are welcome traits. The candidate should possess a postgraduate degree in the stream in which Ph.D. is to be perused. It is necessary to get an M.Phil Degree as pre-qualification.

But in some universities, the candidate can be a Ph.D. scholar without completing M.Phil. Such candidates have to clear theory papers of M.Phil before thesis submission for Ph.D.

This is the first part of a two part series on the PH.D degree. Next week, we shall talk about the role of financial aid in keeping your research afloat, among other topics.

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EXPRESS Education

ARTICLE No. 2



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Ph.D - passion for innovation, anyone?

In the last part we talked about what PH.D was made up of. We touched briefly on the matters of selection of a guide and topic on which a person shall pursue PH.D. Then we also talked of the preparation and submission of the research proposal for presentation before the 'Viva-voce' committee. It is after the committee accepts the proposal, sometimes with some modifications that a person is able to pursue the doctorate.

Gateways after Ph.D.

Teaching Profession

Large numbers of Ph.D. holders prefer teaching as their profession. These intellectuals are innovative and have zest for development. The research carried out by academicians can be published in journals of national and international repute. This is a very lucrative opportunity and there are hardly any geographical barriers for publication of such research work.

Post Doctoral Research

These are economically rewarding tasks coupled with joy of innovation and creation. These opportunities are available in numerous fields.

Research Projects

Research projects undertaken by any university require Ph.D. candidates.

Industry Various industrial units, business houses and conglomerates regularly invite experienced Ph.D. holders as experts to guide their employees.

In this part we shall talk about the various avenues that open out for a Ph.D holder and also discuss the role of financial aid.

Research and Development

All conglomerates and renowned corporates have their independent R&D Divisions which are functioning in full throttle. Other multinationals are also selecting India as their R&D destination owing to availability of brainy, skilled and dedicated manpower and that too at a lower cost in comparison with other countries.

Guest Faculty / Expert

Doctorates also get an opportunity to share their knowledge and research in various universities and educational institutions as guest faculty.

Consultancy

Consultancy is one more demanding, satisfying and rewarding field for doctorates. There are abundant opportunities in the consultancy field like ISO, Quality Consultant, project consultant, Financial Consultant, CRM, Retail Marketing and Rural Marketing. Overall it can be observed that Doctorates in science, Pharmacy and allied branches have numerous opportunities in industrial sector. The demand for Ph.D. holders in social sciences is also showing positive trend in India.

Attitude change due to pursuing Ph.D.

Traditionally we are trained to think in one particular fashion, our education system also strengthens that. There is a typical problem and there are furnished solutions, but once the research activity is undertaken, all sort of W's become an integral part of thought process- Why, when, where, what, who, which and whom. The analytical thinking develops. The mindset becomes such that a persons starts thinking about root causes. An array of various possible outcomes flashes in mind.

As the person gets oriented towards research, approach towards life changes. One becomes more investigative and the outlook broadens. The actions become coherent and systematic. The person becomes responsive to changes. The benefits of research are not limited to the academic enrichment and quenching thirst of knowledge but it also leads to development of a more rational individual.

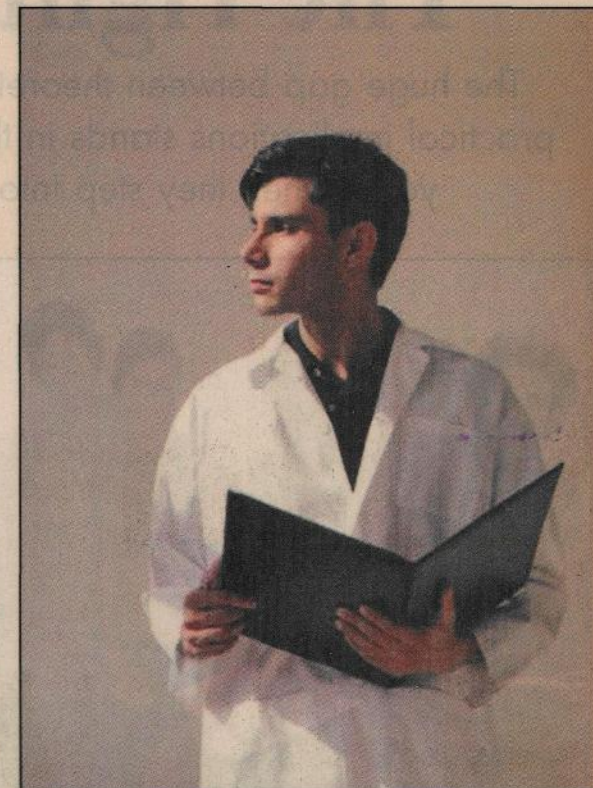
Financial aid

The research work that has to be undertaken for pursuing Ph.D. spans over three or more years. An array of tasks is involved in the process of Ph.D. as mentioned in this article, which requires funding and prior arrangements to carry out the task smoothly.

There are organisations, which sponsor the research work of researchers. Financial aid can be received in the form of fellowship and donations. Almost all universities in India and abroad have department fellowships. Besides, researchers can seek fellowships through UGC-NET-JRF, CSIR-NET, DBT - NET for Biotechnology students, Rajiv Gandhi fellowship for SC/ST students by UGC, ICAR and ICMR fellowships. Institutions abroad offer ample fellowships as well.

The following website links may help aspirants to learn more about fellowships:

- UGC through NET JRF exam
- <http://www.ugc.ac.in/inside/net.html>
- CSIR NET exam for science students
- <http://www.successcds.net/Scholarships/CSIR-SCHEME-FOR-SCIENCE-STUDENTS-SCHOLARSHIPS.php>
- DBT NET for Biotechnology students
- <http://dbtindia.gov.in/btisnet.htm#>
- http://dbtindia.gov.in/uniquepage.asp?id_pk=325
- http://dbtindia.gov.in/uniquepage.asp?id_pk=326
- Rajiv Gandhi Fellowships for SC/ST students given by UGC
- http://www.ugc.ac.in/more/RGNF_scst.pdf



- ICAR fellowships for Agricultural post graduates.
- Indian Council of Medical Research (ICMR)
- <http://www.icmr.nic.in/jrf.htm>

The facts mentioned in the above article are the general guidelines and are subject to specific guidelines specified by any University or an autonomous body. In a nutshell, the procedure of Ph.D. is not drudging. Ambitions, intelligence and individuals having passion for innovation should opt for it and follow their dreams.

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