



## REVISION OF INDIAN PHARMACY EDUCATION; AN IDEA OR A NECESSITY?

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### Abstract

Human resources development in society or organization is a necessity to secure progress. Without such development societies or organizations fail to achieve their objectives. Human resources development is a three-stage measure to meet the requirements of each society or organization. These three stages are: a) planning and programming: at this stage qualitative and quantitative needs are determined; b) education and training: this stage sees human resources shape up to meet needs and to secure stated goals; c) implementation and evaluation: at this stage trained individuals are given assignments in the society. Their performance is under supervision and evaluation and they may receive training if necessary. Looking at pharmacy education as part of an overall human resources development makes you wonder whether education system is in line with this three-stage plan or not. This article aims to encourage policy makers to launch a probe to see whether or not pharmacy education in India is in line with the objectives associated with development of human resources. Can Indian pharmacists who are fresh out of university meet social demands?

**Key words:** Implementation, Pharmaceutical Chemistry, Scientific ability, Assessment.

### History of Pharmacy Education in India

The history of pharmacy profession or practice in India, starts with opening of chemist shop in 1811 by Scotch M Bathgate opened in Kolkata. This was probably the beginning of pharmacy practice in India. In 1824, the east India Company felt the need to train Indians for medical practice and establish medical colleges for their own interest. Though, at that time pharmacy practice was established in England, no initiative was taken to train Indians for effective pharmacy practice. In 1870 the Madras medical college started a training programme for the chemists though later on it became a diploma course. Subsequently, in the Bengal Municipal Act, 1884, a provision was made for having some qualifications to dispense medicine. As per the provision, a one-year course was introduced for training persons for dispensing medicine.

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In 1899, the compounder-training course was introduced in Chennai. In 1928, the State Medical Faculty of Bengal started a two-year course for training compounders. In 1932, at Banaras Hindu University (BHU), Prof. Mahadeva Lal Schroff with his chemical technology background, urged Pt. M. M. Malviyaji to start a separate branch of Pharmaceutical Sciences at BHU. Pt. Malviyaji realized its importance and Schroff was given the green signal to organize this new discipline in India, for the first time Prof. Schroff introduced Pharmaceutical Chemistry as prime subject in B.Sc course in BHU. 1934 - Introduced an integrated second years B.Sc course with the subjects – Pharmaceutical Chemistry, Pharmacognosy and Pharmacy. 1935–Started United Provinces Pharma Association. 1937 - Modified it into a 3 years B.Pharmacy course at BHU for the 1st time. So, he was regarded as the pioneer and father of Indian Pharmaceutical Education. 1939-Modified into Indian pharmaceutical Association. In this year only, he edited a journal called Indian Journal of Pharmacy. 1940 - Prof. Schroff introduced M.Pharm at BHU.

## Expectation from Pharmacy Education

Introduction of drastic economic, social and cultural changes of late have prompted governments to focus their efforts on development and better living conditions for citizenry. This has left a major impact on the health care system and the role of people who are involved in this system. Consequently, pharmacists have a more active role to play. For instance they have to formulate new medication, offer better clinical services and produce radioactive drugs and biological products. Recent developments have given pharmacists a more active role to play in the health care system. Naturally the pharmacy education system should adapt itself to the new atmosphere to be able to train pharmacists who can take care of tasks required in the modern health system. Pharmacy education is a dynamic process, which should make optional use of science and technology to train pharmacists who can play an active role in the national health care system. They should be a reliable source for physicians, nurses and patients. Pharmaceutical care can be a lofty goal of pharmacy education to shed the traditional responsibility of pharmacists, that is dispensing the prescriptions, and turn them into a cornerstone of the health system. That doctors prescribe and pharmacists dispense their prescription is now a thing of the past. The medical science has made a lot of headway. Physicians can no longer take care of all responsibilities associated with medicine by them. The health system now necessitates rational prescription rather than blind prescription. Pharmacists are now required to look into legal and health-related aspects of prescription. Besides they should see whether or not the items on a prescription are proportionate to one another.

So, pharmacists who leave pharmacy schools should meet the requirements of the national plan to develop human resources and those of health care system. In addition they need to have ability to take care of a number of responsibilities such as:

- Scientific ability to answer the questions of customers (physicians, dentists, nurses and patients).
- Technical ability to integrate theoretical knowledge with what one learns at work.
- Contribution to and supervision of the prescription process.

- Contribution to clinical efforts in hospital.
- Supervision of the dosage and selection of the best formula.
- Monitoring the patient after consumption to make sure intake methods are correct.
- Assessment of surveys involving patients and registration of possible complication.
- Preparation of combined drugs on a small scale.
- Dispensation of rational and scientific advice to patients on how to use herbal and supplementary medicine.
- Communication skill to forge a sound relation with patients and medical teams.
- Efforts to instill rational use of drug into the society.

Besides pharmacists should be faithful and good-natured and keep the patients' secrets. To secure such features, a 2 or 3-credit courses is by far less than what is needed. The whole education system should be devised in a way to instill the idea of serving the patients and promoting the health system into students from the very first moment they are admitted. To fulfill such an objective good manners are of paramount importance. Ethical features should be coupled with technical ability to meet pharmacy education needs. In fact efforts to create such ability should be the hallmark of the pharmacy education across the nation.

## Current Scenario

Pharmaceutical education plays a very prominent role in attaining sustainable and equitable development of a country. The curriculum of the degree in some developed countries (B. Pharm.) usually requires 5 academic years of study. In most of the European countries successful completion of a university degree leads to a one-year internship. The formal pharmacy education in India (3 year degree in BHU) dates back 1932, and since then, there has been a continuous growth in number of such institutions. As per PCI 2005 diary calendar, the total numbers of recognized degree institutions are 220 with intake of 12506 students. And as per AICTE, the total number of degree colleges is 445 with the intake of 24672 students as well 30 institutions for the post-graduation in various fields.

The number of accredited institutions is very few. Faculty strength and its quality is a problem. The education system is not geared for the World Trade Organization (WTO) era. Management is not proactive in providing facilities and necessary educational environment. National pay scales are not fully implemented and hence good academia is missing. There are a few centers of excellence where students get all the facilities and are well placed after their graduation. In the next decade, pharmaceutical industries will scout for pharmacy graduates who are inclined to research. Therefore, pharmacy colleges must appoint the right faculty.

### Conclusion

A quick look at the curriculum of pharmacy education progress and pharmaceutical services in India shows the education is not in line with social needs. So a serious scientific review of the pharmacy education, including the system and its curriculum is not a mere idea but a vital necessity. We should design a comprehensive curriculum to meet the changing national health care environment. The primary objective of the pharmaceutical doctorate program should be to train individuals who provide and promote excellent inpatient and outpatient-focused care base. The fact that medical education and the health system are run

by a single management in India (Ministry of Human Resource Development, Department of Higher Education) provide us with a golden opportunity to bring pharmacy education into line with social needs and train pharmacists capable of rendering services at home, rural, and urban levels.

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