

Need for fixing priorities in higher education system

The Government has recently decided to open 'world class universities' for the development of higher education¹. At present the country has 16 central universities besides more than 225 state and agricultural universities. The UGC has prepared a blueprint for the new universities and probably in the coming session of Parliament, a bill may be placed for the same. In the present plan period, higher education has been given recognition as a central subject, where allotment for education has been raised from 7.7 to about 19%, besides increasing expenditure on education to five times the present figure. To bring revolution in modern education and changes in the working condition of the universities, we must emphasize on scientific education and quality research. Basic changes in the education system for establishing a higher education commission which may govern universities and other educational institutions without bureaucratic hindrances are needed.

Our higher education system is not geared to attract talent. India has the third largest education system in the world, with only USA and China ahead of it. The country produces about 2.5 million graduates every year, which is 10% of the youth, but the quality of these graduates is not up to the mark. We take pride in having more youth in our population, but this demographic advantage will become a liability if we fail to address the fundamental issues of higher education. Barring a few premier institutions, the rest do not even have the ca-

capacity to meet the challenges of the new millennium. Universities should be the centres of research. According to Mashelkar (*Times of India*), 'Indian universities also need to excel in research and teaching without research is of little use'. India needs such world class universities¹ which should excel in research, so that the country may contribute substantially to knowledge-based economy of the world. Besides creating excellent education facilities, the country requires a more attractive teaching profession so that we can produce excellent teachers, as there is a chronic shortage of good and quality teachers². Generally, the university teachers are burdened with loads of teaching in addition to establishing good laboratories and other duties. In some cases, teachers are not allowed to attend refresher courses because of their role in other developmental activities of the institution. Until the teaching faculty is involved in quality research of global standard, the system may become stale and sterile. The Indian education system does not lay emphasis on scientific research and sadly, the symbiosis between teaching and research has been lost in the country. As mentioned by Balam¹, 'universities are key elements in driving economic development and in facing the challenges of global economic competition. Restructuring and reform of our existing system must accompany the process of expansion'.

The main purpose of education is to develop creativity in thinking and learning, enhancement of intellectual power,

character development for progress of S&T in the country, and building national character, but in this respect the Indian higher education has failed miserably. Barring a few, most of the universities do not have an integral link with research institutions. Our sole attention should not be only on opening new universities but to make the teaching profession more attractive by providing better opportunities to teachers³. The recent recommendations of the Chaddah committee to look into the various problems of university teachers will definitely stop the exodus of teachers and improve their working efficiency and conditions, so that the young talent may be encouraged to join this profession. The selection criteria must be made more transparent and only interviews should not be the sole criterion. The recommendations have made it clear that knowledge economy is the next big thing and the Government must invest on teachers for long-term gains, so that the profession may get due respect in the society.

1. Balam, P., *Curr. Sci.*, 2008, **94**, 153–154.
2. Desiraju, G. R., *Curr. Sci.*, 2008, **94**, 389.
3. Nagar, P. K., *Curr. Sci.*, 2008, **95**, 1381–1382.

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Sharing biomedical journals in India

Rajagopal¹ and Joshi² have put forth their plans and experiences in the Indian plant research sector on sharing journals. However, methods of sharing scientific literature through consortia approach are not new, at least, to the health sector in India.

The Union Catalogue of Biomedical Serials (UCBS) in India and National Medical Library (NML) are the major initiatives by the Indian Council for Medical Research (ICMR) in this regard.

The ICMR-NIC Centre for Biomedical Information, designated as the 17th International MEDLARS Centre (Indian MEDLARS Centre, IMC), has been catering to the information needs of the medical community from National Library of Medicine MEDLARS databases. IMC provides document support services to the users through UCBS (<http://unecat.nic.in/>). This database of the periodicals holdings of major medical libraries in the country has been compiled

to serve as an important information tool for locating journals of interest in 188 libraries in India. The database is regularly updated and can be accessed by users free of cost.

At NML (<http://www.nlm.nic.in/>), the Electronic Resources in Medicine (ERMED) Consortium is an initiative taken by the Director General of Health Services (DGHS) to develop nationwide electronic information resources in the field of medicine for delivering effective

healthcare. Thirty-nine centrally funded Government institutions, including ten DGHS libraries and 28 ICMR libraries and All-India Institute of Medical Sciences library are its core members. The Ministry provides the funds required for the purchase of electronic journals under the NML-ERMED consortium project. The facility offers over a million articles in the open-access mode from over 1515 medical journals. When fully operational, articles can be searched using the choice of journals, publishers, subjects and keywords of the database. The Consortium is coordinated through its headquarters at NML, New Delhi. NML has earned the distinction of being one of the leading resources of medical information in Asia. NML also has a database of theses from different medical colleges in India.

In biomedical research, locating an article of interest is mostly an electronic search ever since PubMed (<http://www.ncbi.nlm.nih.gov/pubmed/>) became user-friendly with 'Boolean search' options. PubMed has over 6500 biomedical journals, which can be searched electronically. Most of the leading medical

journals provide free e-mail list of contents. Further, medical practitioners now rely on systematic reviews on a given topic to find evidence bases of treatment they provide. A systematic review is a literature review which tries to identify, appraise, select and synthesize all published research evidence. Usually it focuses on a single question. Systematic reviews are generally regarded as the highest level of evidence by evidence-based medicine professionals³. Supported by large publication houses, Chochrane Collaboration and JBI Collaboration are two major initiatives in the systematic review of medical literature. They have developed a search strategy to locate articles of interest world over. We recently adopted and modified their search strategy under a project funded by DST-NSTMIS, Government of India, to locate articles to conduct a systematic review in ayurveda. We emphasized more on locating literature in Indian institutions and databases. We found that the National Institute of Science Communication and Information Resources (<http://nopr.niscair.res.in/>) on-line periodical repository is under development and plans to

provide on-line access to full text articles from research journals. Therefore, if librarians of research institutions could develop a search strategy to locate journals and articles of interest to their institution, sharing scientific literature would be easier. Most of the Indian biomedical libraries and databases provide photocopies of available literature for personal use.

1. Rajagopal, V., *Curr. Sci.*, 2008, **95**, 148.
2. Joshi, G., *Curr. Sci.*, 2008, **95**, 814.
3. Egger, M., Smith, G. D. and O'Rourke, K., In *Systematic Reviews in Health Care—Meta Analysis in Context* (eds Egger, M., Smith, G. D. and Altman, D. G.), BMJ Publishing Group, London, 2001, pp. 3–17.

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Re-thinking on medical admission for science and healthcare

India's population now exceeds 100 crores and the big challenge before the Government is to provide basic healthcare to all segments of the society. In spite of the economic and technological developments and the huge investments made in the medical education sector, the doctor-patient ratio is extremely low in our country, compared to that in developed countries. We need professionally qualified and competent doctors to fill the gap. Therefore, it is the need of the hour to develop a comprehensive medical education policy binding to the whole country, and more investment is to be pumped into the medical education sector. But the current realities are quite dismal. Many students who pass out from the medical colleges are ill-equipped to treat patients. This scenario has emerged with the introduction of capitation fee for medical admission, which is now a deep-rooted malaise in medical admission all over the country. Students with no calibre,

aptitude or interest get into the medical profession either due to the funds they command or due to parental compulsion. Only a few with merit, talent and aptitude for the medical profession get a chance to enter the portals of the medical colleges. It is quite unfortunate that in some states, the minimum marks for the qualifying examination have been lowered, in spite of the IMC directives otherwise. Students who get into the medical profession in the merit category through the medical entrance examination are, no doubt, competent enough to get into the system and will come out as qualified professionals. Due to their interest in the profession, they take the risk of even undergoing rigorous coaching for one more year to fulfil their dreams. Another fact is that we cannot do away with the reservation quota due to our complex socio-economic realities.

However, it is time to have a rethink on the procedure for admission into our

medical colleges. There are two pertinent reasons for this. Now we mourn the declining quality of students who opt for conventional degree courses, and, as already mentioned, many opt for medical education because of parental pressure or due to some other reasons.

In order to get around these situations, we need to think of revising the mode of admission to the medical course. In many developed countries, students opt for medical education after their pre-med or graduation, and the age of entry is usually 21 years. Here, immediately after their +2, at the age of 17 or 18 years, students choose the course without understanding the responsibilities and the commitments that are needed for the profession. If we decide to fix any degree in science, with biology as one of the subjects in +2, as the minimum qualification for admission to the medical course, it will serve two purposes. First, many good students will come for basic degree