

## University science set to decline: a new caste system

*Deepak Kumar*

With the economic growth that the country has seen in the last decade, science education has also seen a boost in spending by our government. The funding to existing institutions in science and technology development has been raised by factors. Several new institutions of teaching and research and central universities have been started. Moreover, to take advantage of the expertise in existing institutes and science laboratories, many of these have been granted the status of 'Deemed University' which enables them to start teaching programmes in specialized disciplines. To further attract young people to careers in science and related technological disciplines, several scholarship schemes, talent hunts and DST programmes like INSPIRE have been initiated.

All these developments are a welcome change. Early leaders, like Pandit Nehru recognized the need for higher education and science as essential components for the transformation of our poverty-ridden society. But the funding to higher education was at a basic level barely enough for survival. A generation of people, largely from educated middle classes benefited from these opportunities. However, for a larger fraction, dreams to do and participate in high level of scientific and technical research soured, and expectations were far from realized.

The current initiatives are essentially a response to these problems. Though we are still far from what the developed nations spend on research, our government is certainly promoting science through larger budgets. It is a truism that much more than mere infusion of money is required to take care of the hurdles that our scientific development has faced all along. Even when the money is there, unless it is judiciously spent to target well-identified problems, it will not produce the desired results. Already one has faced a rather ironic situation in the past decade or so. Although institutions and universities have been acquiring advanced equipment, there are not enough people to utilize and run them for fruitful research. Decades of deprivation of funds and encouragement have rendered research and teaching careers so unattractive that even interested and talented

people have not been coming to these professions.

The main purpose of this article is to point to another fallout of this abundance that is seriously affecting the growth of science in the existing universities. It is strange that these new developments have put universities at a huge disadvantage vis-à-vis IITs, IISERs and research institutions. In the current scheme of things, there is a large disparity in salaries, which has seriously affected the morale of science teachers in the universities. At present, a new assistant professor is recruited to an IIT or IISER at a typical gross salary of Rs 59,000, whereas a similar position is offered at a salary that is Rs 18,000–20,000 lower. The standard argument given for this discrepancy is that the entry qualifications at the aforementioned institutions is higher than those applicable to universities. But in universities with good traditions in science research, the typical qualification of a new assistant professor is a Ph D with strong publications and post-doctoral experience of a few years. This is no less than the qualifications required by the IITs or IISERs.

This salary discrepancy added to other disadvantages in terms of research facilities has naturally led to a flight of talent towards institutions. From a certain point of view, this is the desired objective. New centres are emerging where young people have the opportunity to work unshackled from funding hurdles and the usual bureaucratic atmosphere of the universities. The thinking is that to raise our research to topmost international level in the quickest possible time, it is preferable to nurture a few institutes where talent, funds and facilities can be concentrated. However, assumptions underlying this position need to be critically examined in our context.

First, in our country with the largest young population in the world, most of the human potential is untapped. Higher education, particularly in science, is still accessible only to a small fraction. The quality of science education provided in schools except those in metropolitan areas is too poor to enable their wards to join any higher level courses. The university system at least touches some part of this talent base. The intake of the

institutions is too miniscule to cater to but the most well-trained, who have already had the early advantage. Second, universities, till recently, were the only places where advanced research projects involved participation of young students. All over the world the practice of involving young students in scientific research is the one that has paid the richest dividends. While taking teaching to specialized institutions does serve this purpose, it is not the same thing as learning in a university. Young people need exposure to various facets of life and knowledge, and a specialized education in science may miss the overall rounding required for personality development.

Third, our universities have a large pool of motivated scientific manpower that has worked under a lot of handicaps and strengthening it would be profitable in the long term. My belief is that by augmenting resources and providing facilities and encouragement to the university departments, the best in the faculty would come out. Setting up new institutions costs huge amount of funds and it takes a lot of time to build the infrastructure like laboratories and find the high quality staff and faculty to man them. If we expect our country to become a technological power, clearly we need a much larger technological manpower, for which it seems necessary to upgrade the valuable resource of our university system.

In the current pattern, the science faculty of the universities is beginning to feel second rate, even though their salaries and facilities are better than ever before. With the diversion of young science talent from the universities, their standards are bound to decline. The much larger mass of students will lose the benefit of learning from a better qualified faculty for the sake of a few. The natural justice requires that people with similar qualifications and accomplishments be paid the same salary. Our science community should take cognizance of these concerns and find an equitable way to address them.

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*Deepak Kumar is in the School of Physical Sciences, Jawaharlal Nehru University, New Delhi 110 067, India.  
e-mail: dk0700@mail.jnu.ac.in*