

## Rediscovering our universities? – yes, but how?

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Any intellectual debate on the reforms of Indian universities always appeals to my ‘action oriented’ genes, and one is keen to express oneself on the subject, particularly when ignited in an editorial<sup>1</sup> by a ‘university scholar’ like T. V. Ramakrishnan (T.V.R.) who has welcomed more action. So, here are some observations, comments and suggested actions.

### The ‘Triune’ caste system of Indian higher education

The three divisive ‘castes’ do indeed exist: (i) ‘Institutes’ (autonomous research institutes and national laboratories); (ii) ‘Universities’ (all kinds as recognized by UGC) – 700 and more; and (iii) ‘Colleges’ (affiliated to all universities) – over 35,000.

Almost all of them operate in academic silos. Even within a university campus, one has seen discipline-wise boundary walls, with non-interactive academic communities. So how do we pull down these caste barriers?

### What do we do with the ‘institutions’?

The autonomous institutions and mainly the national laboratories of all the scientific agencies are the legacies of Shanti Swarup Bhatnagar (the CSIR laboratories), Homi Bhabha, Vikram Sarabhai and D. S. Kothari (the atomic energy, space and the defence laboratories). All of them have very well served the specialized research agenda that they were set-up for, but did not involve and undertake undergraduate teaching, which is the essence of an ‘ideal’ university system. Their isolated existence thus indirectly affected the growth of an ideal university culture in our higher education and research system. This needs to change. As mentioned in the editorial, taking the examples from France (the CNRS system) and Germany (the Max Planck Institutions), our national laboratories must ‘re-integrate’ or ‘entwined academically’ with the Indian University system. At one stage this would have sounded like ‘blasphemy’, but lately many of the national laboratories have themselves

sought some kind of a ‘deemed university’ status (to be able to give their own degrees), but without undertaking the responsibility of ‘undergraduate’ teaching. The MHRD/UGC system must insist that all ‘degree giving’ institutions must undertake undergraduate teaching. In this process, a large number of our undergraduate students would be exposed to the research being carried out in these national laboratories and have hands on experience of working with research equipments available in the national laboratories. In short, all the national laboratories and autonomous research institutions should be academically integrated into a true ‘university’ culture. A similar suggestion had been made earlier<sup>2</sup>. Now that the French and the Germans have done it, we need not feel shy in doing so!

As an action point, the Indian Academy Sciences, in collaboration with the other academies, should request the government to organize a meeting among the Ministry of Science and Technology, the Ministry of Human Resources Development and the Prime Minister’s office with an agenda to ‘Reintegrate the ‘Institutions’ and the ‘Universities’, and get them ‘entwined’ academically’. Having seen from close quarters how things can be got done (e.g. the setting up of IISERs), I believe this suggestion need not be considered naive and impracticable, as suspected by T.V.R. If the academies take it forcefully, it can be done.

### The universities and the affiliated colleges

The editorial has rightly bemoaned the pathetic situation about the relationship between the universities and their numerous ‘affiliated’ (but not cared for) colleges. I support the idealism of T.V.R. in demanding that the number of colleges affiliated to a university should be ‘zero’ and that these colleges are fully absorbed in the university education system. But here we may have to go with patience and try to reach this goal in stages. The National Knowledge Commission, whose recommendations are still relevant but ignored, had indicated another approach

by suggesting that some of the colleges, or a cluster of them, could be converted into a university. Knowing India’s geographical spread and need for providing access to higher education in rural areas, the concept of colleges far away from their universities, had been accepted and this needs to change, carefully looking at the cluster of colleges that can be integrated into universities. Fortunately, many of our universities (and the CSIR national laboratories) have very large campuses and it is quite possible to have some of the campus area to be used for collocating some of the existing ‘affiliated’ colleges, thus enabling the possibility of enhanced interaction between the undergraduate and postgraduate students and teachers. However, it must be remembered that mere physical and geographical ‘integration’ is not enough and the programmes of education and research should also be integrated. Apart from the administrative and the physical disconnect between the universities and their colleges, the bigger mindset that has to be changed is that the professors from the universities would be willing to teach the undergraduate students and further would make efforts to engage the college faculty to join the research programmes in the university. Our undergraduate students do not get an opportunity to experience the research culture that is more obvious in the university than in a college environment. Such an environment of close interaction between undergraduate and postgraduate education systems is likely to enhance the research culture in the undergraduate system.

Many of our national laboratories – which fall in the category of the ‘institutes’ – also have large geographical campuses and they could also be made to house more undergraduate colleges on their campus and operate more like a ‘university’! The laboratory facilities and the research environment that is present in many of our national laboratories could thus be made available to our undergraduate students as well. One is quite confident in saying that the national laboratories are also likely to benefit from such an arrangement, as they will also have access to undergraduate

talented students who seem to show an aptitude for research at an early age. It is well known now that in the US university system, the undergraduate students invariably publish a paper with their faculty members, before they complete their undergraduate degree. It will still be uphill tasks to make the scientists of the national laboratories take up undergraduate teaching. But once again we must recall how Richard Feynman – the physics Nobel laureate – enjoyed teaching the undergraduate students on the Caltech university campus. The initiative of IISER set of institutions has shown that senior scientist would be interested in teaching undergraduate students if the system encourages such an exercise. The concept of ‘affiliated’ colleges has to be drastically revised and the target for the

next decade should be to achieve the ‘zero’ affiliation formula advocated in the editorial. Once again, the Academies have to take a lead in trying to bring about this change and the RUSA target of affiliated colleges should be drastically reduced from the presently stipulated number of 200 to ‘zero’ over the next decade. This proposal of packaging the colleges in the university campuses is not undoable as it may sound to college principals and vice chancellors of the universities. This was indeed an innovative approach that the National Knowledge Commission had suggested in its report<sup>3</sup>. Let us revisit this suggestion.

Rediscovering our universities is needed, and is possible, if the three Academies of Science in India take it up with higher ups in the government sys-

tem of Science, Technology and Education and articulate an agenda for ‘integrating the triune caste system of higher education in India’. In doing so, the Academies would do a great service to Education and Research in India. Some of the elements of the agenda are discussed in this commentary.

1. Ramakrishnan, T. V., *Curr. Sci.*, 2016, **110**, 1879–1880.
2. Lavakare, P. J., *Curr. Sci.*, 2011, **100**, 22–23.
3. National Knowledge Commission Report 2006–09; <http://www.aicte-india.org/downloads/nkc.pdf> (visited on 8 June 2016).

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