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EDITORIAL

Higher Education: Tilting at Windmills

The Joint Entrance Exam (JEE) of the IITs has for long been the flagship of the elaborate system of entrance examinations, that need to be faced by students attempting to enter universities and national institutions. JEE has, over the years, acquired an image that ensures a great sense of accomplishment to students who appear high on its merit lists. A high JEE rank is a badge of honour in the days and weeks that lead up to the admissions to the IITs. Many successful students have spent three to four years, of early adolescence, training for the examinations. Coaches and coaching schools have mastered the art of preparing students for the examinations; a no mean task given the widely diverse social, economic and educational backgrounds of those who emerge successful. Discipline and intensive exposure to problems mimicking those that appear in the JEE exams are a hallmark of the coaching centres. Residential centres provide a new dimension in regimentation. Many students focus on entrance tests, paying only cursory attention to their school board examinations. Of the hundreds of thousands of students who appear in the JEE, a small fraction are successful. The others must necessarily turn to other exams; and there are many. This intense competition for limited opportunities has led to many public debates on whether students are being over-stressed, in attempting to negotiate a bewildering range of hurdles in seeking admission to higher education institutions. While the pressure is the highest for the national, centrally funded institutions, admission is not always easy even in the best of state supported and private institutions. The Ministry of Human Resource Development (MHRD) embarked some time ago on a campaign to limit the entrance exam burden and to restore, at least to a limited extent, the importance of school board exams. A new formula has emerged for the JEE which has engendered considerable controversy. Charges that the 'brand equity' of the IITs is being diluted are being loudly voiced; suggesting that the JEE is the major contributor to the strength of an institutional reputation which is indeed high. Do institutional reputations depend predominantly on the rigour of their procedures to select students or is it also a function of their ability to act as a key transformative agent in the education of students? A long time ago post-graduate students who entered one of our more prestigious IITs, the

institute at Kanpur, were poorly prepared, with limited exposure to their chosen disciplines. An institutional ethos transformed many of them, opening windows of opportunity that had never been sighted before. I was one of those who was seduced by science in an environment that was challenging, formidable, at times, and stimulating. This was true in the 1950s and 1960s of many of our universities, then staffed with faculty deeply committed to teaching, mentoring and furthering their discipline. The current drive to mend something that does not seem to be irretrievably broken, the JEE, appears to be focusing on a diversionary issue; ignoring the main problem of enhancing the quality of a large number of existing institutions, which in turn will provide stimulating educational opportunities for the growing number of students enrolling in higher education.

The JEE debate has been fuelled by a single slogan: 'Reduce the number of entrance examinations and move towards a single national test'. The stated objective is to reduce student stress levels and to provide an adequate weightage for school board exams, thereby enhancing their importance, while diminishing the influence of coaching centres. Stress arises from parental and peer pressure, which pushes students to aspire for entry to the best institutions. If the number of institutions is miniscule and the number of aspirants keeps rising, it is hard to imagine a new avatar of JEE being a 'stress-buster'. There is a clear and repeatedly recognized need for increasing the number of high quality institutions, expanding the number of windows of opportunity for students. Government, egged on by commissions, committees and diverse political compulsions, has indeed announced the creation of a slew of new IITs, IISERs and Central Universities. Many are up and running, but it will take some years before all the new institutions begin to be counted in the same breath as the old IITs. In this phase of expansion there was little public debate on our old institutions; hundreds of universities across the country. Was there a possibility of attempting to restore the sheen on the best of our old universities? After all, in the first quarter of a century after Independence, the Universities at Delhi, Calcutta, Madras, Bombay, Poona, Benares, Aligarh, Mysore and many others boasted of an academic ambience that was created by accomplished and enlightened

faculty, supported by a largely non-intrusive political environment. The decline that began in the 1970s has continued unabated and indeed accelerated in recent years.

A recent column highlights a specific example in the field in which I have been an avid watcher for many years. M. Vijayan, a structural biologist of considerable distinction, a former President of the Indian National Science Academy and a long term colleague, writes with feeling about the decline of an academic science department which once produced some of the most original contributions to emanate from post-Independence India. He chronicles the slow sinking into oblivion of the Department of Crystallography and Biophysics at the University of Madras (*The Hindu*, 20 May 2012). The centres origins may be traced to 1952, when G. N. Ramachandran, then barely thirty, moved from Bangalore to head the new department of physics, a position offered to C. V. Raman, who suggested instead that one of his most promising students be chosen. Ramachandran went on to build a vibrant school in a new area emerging at the confluence of biology, physics and chemistry. Two remarkable contributions are still discussed in contemporary research. In the early 1950s, Ramachandran produced the triple helical structure of collagen, close on the heels of biology's other famous helices; Pauling's α -helix in proteins and the Watson-Crick double helix for DNA. This was a feat which firmly announced that Madras University now had a rising star in its ranks. A decade later, the now famous Ramachandran Map emerged, a stellar contribution to structural biology, that has found its way into textbooks of biochemistry. By the late 1960s, one of India's most visible research centres was located at Madras, in the ambience of a state university. The decline began in the new decade, with Ramachandran and many of his colleagues migrating to Bangalore. A once proud department, which boasted of one of India's first computers and a fine tradition in crystallography was on the way downhill. The local conditions turned inhospitable for true academic work and even more importantly, slowly allowed retirements to whittle down the faculty to an insignificant size. The ability to slowly starve departments to death has been practiced effectively in many universities. 'Inappropriate appointments', a phrase used by Vijayan, is another factor that has hastened the decline of university departments across the country. State universities face constraints imposed by their environments. Central universities, to some extent, have a greater degree of autonomy from government. The current drive to expand higher education focusses on the creation of new institutions; the large, old universities are usually left

alone, with an occasional display of financial largesse when the annual budget is presented.

A critical problem facing the new institutions, and indeed old ones which attempt renewal, is the apparent shortage of good, well trained faculty. Many new institutions seek to have a predominantly research focus, sometimes paying little attention to the ability of newly recruited faculty to develop into competent, if not inspired, teachers. The government and Parliament have readily acquiesced in effecting a feat of alchemy, by which research organizations with specific mandates are transformed into deemed universities and 'academies'. The very notion of a university is sometimes subverted in the headlong desire to acquire a status that provides a legal sanction to award degrees. Many young, potential academics would prefer to work in an environment devoid of the demands of teaching, which also labels them as 'professors'. The rise of a professoriate which does not 'profess' is a sign that is ominous for the future of higher education. The benefits of teaching in research are often recognized only at a relatively late stage in academic careers. If faculty are hard to come by how will new institutions fulfil their goals and the aspirations of an ever increasing number of students? How do old institutions cope with faculty attrition? Even as India's economy stutters, austerity and resource constraints are terms that will be heard more frequently. Hard times will be familiar to all those old enough to remember. 'Sanctioned posts' will become more difficult to obtain further constraining faculty induction.

The attempt to reform the sector of higher education in India began several years ago with a slew of recommendations from the National Knowledge Commission, the Yashpal Committee and many other committees focusing on specific disciplines. The key issues of institutional governance and autonomy were the focus of many recommendations. The number of Bills pending before Parliament is testimony to a desire for change. Unfortunately, reform in its truest sense cannot be centrally legislated. It must come from within institutions, exercising the limits of autonomy that they possess. It must come from a perceived need within institutions for change. Government and the relevant ministries both at the Centre and the States can only act to facilitate, catalyse and promote the process of change. Sadly, there is little real interest in higher education reform in these circles. Reforming the JEE by a central diktat may be the first salvo in a battle for change, that is beginning to resemble one of Don Quixote's famous campaigns. Tilting at windmills may be entertaining, but hardly effective.

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