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GUEST EDITORIAL

Will our education system enable India to be a super-power any time soon?

Many believe that India, with its high gross domestic product, can now nurture hopes of becoming a super-power. Whether or not one shares the yearning to be a super-power, the country should almost certainly have to have a knowledge-rich economy, if not a knowledge-driven one. And the education system has much to do with generating knowledge and nurturing the talent that produces and utilizes this knowledge. Let us therefore take a look at our education system, and the comments by thinkers elsewhere on education in general.

The well-known biologist Gregory Petsko some years ago wrote a sarcastic open letter to the President of the State University of New York (SUNY) (Petsko, G. A., *Genome Biology*, 2010, **11**, 138–140), taking issue with the decision to close down the departments of the Classics, French, Italian, Russian and Theatre in SUNY. Petsko narrated how he had trained in the classics before turning his attention to biology, and ultimately ended up as professor of biochemistry and chemistry. He stated that his training in the classics had been one of the most important components of his education. That training had taught him to think, analyse and write, something his science education had not done for him, and it had therefore helped him be a better scientist. Petsko's opinion pieces in *Genome Biology* are well known, and of course it was his training and interest in the classics that help him write about science and society – something that many scientists are unable to do. Besides being a member of the National Academy of Sciences of the United States (US), he has been elected a member of the American Philosophical Society, a rare honour for a scientist.

Some points that Petsko raised in his letter were: (a) one should not close down a department simply because that area does not appear relevant any more. Many virology departments had been closed down in the US before the HIV/AIDS crisis hit, and the nation had to scramble to find the remaining virologists to mount an attack on the disease. (b) one should not close down an area of work simply because it cannot be financially self-supporting. A university's motto is not only to create knowledge, but also to preserve knowledge. Not too many US campuses offered Arabic or Persian language

courses, or took interest in the Middle East in general. And then when 11 September 2001 happened, suddenly everyone was wishing that they had more expertise on the Middle East to make sense of what had happened. (c) If SUNY was going to focus solely on courses of practical utility, then it should call itself a trade school or a vocational school, but certainly it would no longer be a university.

I turn now to the brilliant philosopher and logician Bertrand Russell. Apart from his scholarly work, he took interest in social issues and took many controversial positions. His opposition to the First World War saw him viewed as a traitor, and he was even jailed for a while. Years later, he came to be seen as one of the foremost thinkers of the 20th century, and was awarded the Nobel Prize in 1950. Interestingly, this was not for his area of research, but for championing freedom of thought. In 1950 Russell published a set of essays (Russell, B., *Unpopular Essays*, Routledge Classics, Indian reprint, 2010), including one titled 'The functions of a teacher'. Some points that he made in it are: In modern times, the teacher has become a civil servant and therefore is often a proponent of the state's propaganda. He observed that while teaching students uncontroversial information such as the periodic table is necessary, it will only produce students who are technically skilled. And such teaching is only the most basic aspect of what a teacher needs to do. Governments know how powerful teachers are, since they mould how young people think. This can either involve having an open mind on controversial topics, as happens in more open societies, or being tutored on one point of view alone, as happened in Nazi Germany. A teacher must promote the spirit of inquiry, and if that leads to an understanding that differs from the view of the state, there should be no penalty for it.

What is the situation in our own universities? Noted educationist and commentator, Krishna Kumar of the University of Delhi in his 2012 article in *The Hindu* (Universities, ours and theirs, *The Hindu*, 9 August 2012) compared the scenario in Indian universities with that in the West. He identified several differences that separate the two, and commented on each one of them. He first

touched upon the emphasis on excellence. The Western system has elaborate procedures in place to ensure that only the best available talent is recruited as a faculty member in a University. The recruitment procedure is impervious to external pressures that dilute the process. The procedure lays an emphasis on trans-disciplinary interests of the candidate. In Indian universities, appointments have become embroiled in rules, regulations and external influences that often prevent selection for excellence. For instance, a candidate with trans-disciplinary qualifications could become a quick casualty of the selection process if he or she has crossed an age limit. Second, in India, there is an over-emphasis on the number of hours a teacher spends in the class room per week, and likewise on the attendance of the students. There are rules for both of these, and everyone focuses on following these rules, without a thought on what actually happens inside the classroom. Krishna Kumar contrasts this with the system in the UK from his experience as a member of an evaluation committee for a course run by a teaching institution there. Besides going through all the documentation concerning the course – including a description of each classroom session held that year, and written feedback from each student – the committee had extensive discussions with students and faculty, separately, on various aspects of the course. They observed that a class must excite, and possibly entertain, and it was unlikely that a teacher who did not bring sufficient knowledge, enthusiasm and innovativeness to his or her pedagogy received very good feedback from the students. The third difference relates to the almost universal emphasis on research in colleges in the West. Krishna Kumar observed that there is no question of a fixed syllabus, set by a University that goes virtually unchanged decade after decade, as we often see in India. Further, memory based examinations, that we are so familiar with here, are not practiced in the UK. It is interesting to note that the Chinese administer a thought-based exam, Gaokao, before any student can apply for admission to college (Nitin Pai, Education is strategic. *Business Standard*, 13 July 2018). Faculty who do research teach courses that match their research interests, thereby getting students interested in asking questions that research could answer. It is not merely the learning of prior knowledge, but helping to create that knowledge, or at least participating in the process of creating knowledge that is important in education.

In another article (The bleak new academic scenario, *The Hindu*, 26 May 2017), Krishna Kumar focused on what has happened to higher education in India since the process of liberalization began. Although both the Central and State governments played major roles in education until then, when India's creditors required the country's economy to undergo structural readjustment in 1991, it soon emerged that higher education would have

to largely support itself. This, naturally, led the institutions to offer courses that provided marketable skills. As universities felt an increasing financial pinch, many turned to such courses to bolster their income. Further, with shrinking numbers of 'permanent' faculty, it was left to ad hoc teachers to fill the gap. (What a far cry from the situation in Finland, where the most prestigious job is that of a teacher, who, after all, is educating the next generation which forms an important part of the country's assets.) To the extent that a university encourages discussion and dissent as a way of honing students' abilities to think, to analyse and to collect data for their positions, a university produces young people with independent voices. And these voices are often critical of the world around them. This is something extremely healthy for society, and yet politicians in India have generally been wary of universities that seek to provide such a liberal education, one with a wider perspective of the world. It is clear that the more higher education must be 'self-financing', the less it will train young people in this manner, since all education will simply be utilitarian. However, over the past few decades, there have been no efforts by any political party or any government to save the universities from slipping into a worsening situation.

Before ending, I quote from an anthropologist writing about something very different. '...the black man learned that... Among whites his behavior had to conform to this imposed station and he was constantly reminded to "keep his place". He learned that it was not acceptable in the presence of white people to show feelings of indignation, frustration, discontent, pride, ambition, or desire: that real feelings had to be concealed behind a mask of innocence, ignorance, childishness, obedience, humility and deference.' ('Rapping in the black ghetto' by Thomas Kochman; in *The Pleasures of Anthropology*, 1983.) How prevalent is this phenomenon in our classrooms and our research labs, and what are the costs in terms of knowledge generation?

If India seriously wishes to be a super-power, it is likely to achieve this only by being a top knowledge-generating country. And if it wants to be such a country, it can only do so by instilling in its people – from childhood – the habits of free inquiry, regardless of the positions that this leads the enquirer to. It would be ironical, but to me unsurprising, if such free enquiry leads the students to conclude that India should not aim to be a super-power any time soon, that there are more important goals to be achieved first.

Gayatri Saberwal

Institute of Bioinformatics and Applied Biotechnology,
Bengaluru 560 100, India
e-mail: gayatri@ibab.ac.in