

## Institution Building

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### Need for this Debate

A discussion of the challenges we face in building world-class educational institutions of higher learning is timely and opportune. It is timely because, to succeed now, a nation must develop its economic, scientific and technological capabilities so that it can compete with the best in the world. A nation cannot get this competitive strength without developing world-class educational institutions within its boundaries. Without MIT, Harvard, California Institute of Technology and other such renowned institutions, would America have got its industrial, economic and military might? Therefore, if India wants to shake off the 'third world country' label, then the responsibility of doing so must fall on the shoulders of the nation's elite academicians. They must identify the nation's impediments in building world-class educational institutions and remove them with the greatest urgency. For, leaving this task to the Indian politicians and bureaucrats would mean condemning our present and future generations to live forever with the label of 'third-world-citizens.'

The recent US India nuclear deal and the Indian IT firms' outstanding success across the globe are tributes to India's higher educational institutions. These institutions have given the nation the best scientists and technologists who, in turn, have brought glory to India. Without the Indian Institute of Science, could Bangalore have become the global centre for microelectronics? Could the recognition that India got as a responsible nuclear power been possible without BARC's outstanding contribution to the development of the nation's nuclear capability?

### How to Judge our Institutions?

While we must publicly applaud the institutions of higher learning for their contributions to the Indian society, we must not rest content with their achievements. How do we judge the performance of the institutions of higher learning? Should their contributions to building the nation be an important yardstick in judging their performance? What impediments do these institutions face in achieving global standards of excellence? We must constantly ask these questions to avoid falling in the deadly trap of complacency and mediocrity.

We can use the following yardsticks commonly used to judge the performance of educational institutions of higher learning: How many Nobel laureates have our educational institutions produced? How many patents have our technological institutions got? How many world-class research journals, widely acclaimed by scholars in the respective fields, do we publish in India?

From 1913 to 1998, six Indians got the Nobel Prize. If we include Sir Naipaul in the list of Indians who have won the Nobel Prize, the number in our list would increase to seven. However, we must note that Sir Naipaul is of Indian origin but is not an Indian citizen. Further, of these seven, only four were Indian citizens when they got the Nobel Prize and only three out of these four

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<sup>1</sup> Address delivered in the National Conference on Challenges in Creating World Class Educational Institutions organized at IIM Ahmedabad in honour of Professor J.L. Saha on the occasion of his superannuation from the services of the Institute.

lived in India. To see how dismal this performance is, we need to see the number of Nobel laureates that MIT has produced in different fields. The statement in its web site about the Nobel laureates in MIT is illuminating, and therefore I reproduce below some excerpts from this statement:

Sixty-one current or former members of the MIT community have won the Nobel Prize. They include 25 professors, 24 alumni (including three of the professors), 14 researchers, and one staff physician. Twenty-six of the Nobel Prizes are in physics, twelve in chemistry, thirteen in economics, eight in medicine/physiology, and two in peace.

The sheer number of Nobel Prizes that the MIT community has won, by any standard, is impressive. The wide range of subjects in which it has won the Nobel Prizes is, in fact, more impressive than the mere number of Nobel Prizes that it has won. This list of prizes spans nearly all the prize categories from physics to economics to peace.

It is hardly necessary to stress the beneficial impact these Nobel laureates have on the quality of education in the educational institutions to which they belong. They do teach courses for beginners, giving them rare insights into the subjects that even the best of professors would find it difficult to provide. Therefore, is it surprising that many of these beginners blossom into high-calibre researchers? Thus, the presence of these Nobel laureates produces a virtuous circle. These eminent persons produce high-calibre researchers who, in turn, become Nobel laureates and the circle continues.

The dismal record of Indian educational institutions of higher learning in producing Nobel laureates has a natural corollary which is that their performance in publishing high-quality research journals or getting many patents is not very much better.

We can, of course, argue that the financial resources at our disposal are nowhere near the financial resources that either MIT or Harvard has. Therefore, is it correct to expect that we would match their performance in producing the number of Nobel laureates these universities produce? There is some merit in this argument but it is not entirely convincing. India was not even a sovereign nation when Rabindranath Tagore and Sri C V Raman won the Nobel Prize. In addition, the financial resources that India has now are far more than what the nation had in the early 20th century. Undoubtedly, availability of financial resources does matter in producing high-quality research. However, the zeal for doing research and the environment that creates a passion for undertaking such research matter even more.

### **Institutions' Contribution to the Economy**

The other argument is that the Indian educational institutions of higher learning are under considerable pressure to address the practical problems that the nation's industry and governments face. Therefore, the educational institutions use their resources more for applied research and less for basic research. Perhaps our educational institutions would be more comparable to the educational institutions in Japan or in Switzerland where the emphasis is more on applied research and less on basic research. This argument is also not very convincing. Let me cite three observations in support of my point.

The Economic Survey, 2005-2006, highlights the need for achieving high productivity levels in Indian manufacturing industries. Also, it points out the productivity growth that Indian manufacturing has

achieved. While Japan and Korea have distinguished themselves by achieving outstanding levels of productivity in manufacturing, their Indian counterparts are floundering. Have the institutions of higher learning failed the Indian manufacturing industries trying to upgrade productivity?

The flagging levels of productivity in Indian manufacturing industries cause more concern when we see it along with the large deficit in the current account for the year 2005-2006. The reason for such a large deficit was the rise in non-oil, non-bullion imports.

The economists argue that such a sharp rise in imports is because of the high imports of capital goods which the nation's industry needs because of its rising exports. Therefore, they conclude that this large deficit in the current account need not be a cause of concern. We would accept this argument if the Indian industries' productivity was high and rising. However, as I have pointed out earlier, the productivity in the Indian manufacturing has declined in the post-reform period. Therefore, the high current account deficit is symptomatic of a deeper malady in India's trade pattern.

My concern is that the Indian industry is importing high-value-added products and services and exporting low-value-added products and services. In other words, we are importing sophisticated submarines and fighter aircrafts and exporting 'four dollar garments' and low-priced, small cars such as Indica and Santro. If our trade pattern continues on these lines, then we are abdicating our responsibility to "provide high and rising standards of living to all citizens." Are the institutions of higher learning aware of this impending danger? Are they willing to face the challenge of working with the governments and industry to change the pattern of trade? Would these institutions point out that the nation must import less sophisticated products and export more sophisticated products?

### **Reasons, Responses and Responsibility**

Why did we come to such a sorry pass? I believe there are four reasons. First, the governments did not do their job of pushing and challenging the educational institutions to upgrade educational standards. Rather, they did the opposite by forcing the educational institutions to take students and faculty on relaxed standards. Second, the institutions of higher learning surrendered to this demand without innovating alternate methods for addressing a genuine societal problem. Charging low fees to keep the cost of education low was the third reason for the debacle that we are now facing. Lack of demand for highly educated and skilled persons from independence till 1998 is the fourth reason for our present plight.

The society has given the institutions of higher learning the responsibility of creating highly educated, skilled and responsible persons for the society. These institutions, therefore, must maintain high standards of education and convince the outside world that they are doing so. In addition, they must also convince the outside world that their education is not merely confined to imparting knowledge and skills. The education they impart also inculcates values that help the students in controlling their senses, training their understanding and finding a path to attain wisdom.

### **Author's Profile**

**V. L. Mote** was a Professor at Indian Institute of Management Ahmedabad from 1962 to 1993.