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Panel to decide on two-tier or single IIT test format

PIONEER NEWS SERVICE ■ NEW DELHI

With the new formula of entrance test for IITs embroiled in controversy, the HRD Ministry and the premier engineering institutes have now woken up to the need for a broad-based study taking into account all issues related to the 2014 examination.

A 'separate committee' for 2014 will look into the matter including if there was a need for a two-tier examination system or if a single entrance test was fine with the aspirants.

The 2013 entrance test for IITs will be a two-tier system comprising JEE (Mains) and JEE (Advanced) with a rider of performance within 20 percentile of Class 12th board results. Meanwhile, only five States — Maharashtra, Gujarat, Haryana, Goa and West Bengal — have responded to the HRD Ministry's proposals to participate in the single entrance test format. Uttar Pradesh also has responded positively, sources said.

The decision of a separate committee follows IIT-Kanpur's resolution in the senate meeting last week wherein it felt the need for a broad-based study taking all aspects into consideration to decide the nature of the entrance test for 2014 and beyond.

"For JEE 2014 and beyond a Senate committee be constituted that will study all aspects of the admission process and arrive at recommendations," it said in its resolution. It further said the study should be based on sound methodological principles supported by data collected from appropriate original sources.

ONLY FIVE STATES — MAHARASHTRA, GUJARAT, HARYANA, GOA AND WEST BENGAL — HAVE RESPONDED TO THE HRD MINISTRY'S PROPOSALS TO PARTICIPATE IN THE SINGLE ENTRANCE TEST FORMAT

The senate also recommended that JAB should constitute a separate committee consisting of representatives nominated by senates of the IITs to advise JAB on the nature of the IIT entrance test and the process of admission for the 2014.

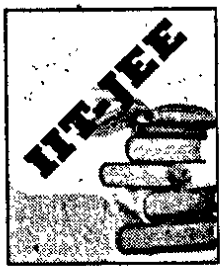
The IIT-Kanpur on Saturday had accepted the common entrance based on percentile ranking as an "interim" measure only for 2013 and retain the existing eligibility condition for students who passed their board examination in 2012.

हमारी आईआईटी टॉप 200 में नहीं; क्यों?

'आई.आई.टी' ने इंजीनियरिंग शिक्षा में निश्चित रूप से अपना एक अलग स्थान बनाया है

❑ अपराजिता

इंडियन इंस्टीट्यूट्स ऑफ टेक्नोलॉजी 'आई.आई.टी' ने इंजीनियरिंग शिक्षा में निश्चित रूप से अपना एक अलग स्थान बनाया है। इसके टॉपर्स न केवल इंजीनियरिंग कम्पनियों में बल्कि गैर इंजीनियरिंग कम्पनियों में भी उच्च वेतन पर नियुक्ति पा रहे हैं। शायद यही वजह है कि आई.आई.टी. में प्रवेश पाने के लिए छात्र कड़ी मेहनत करते हैं और इनका 'स्तर' कायम रखने के लिए आरक्षण पर प्रबंधन व सरकार के बीच हमेशा टकराव की स्थिति बनी रहती है। इसलिए यह आश्चर्य की बात है कि हमारे देश की एक भी आई.आई.टी. आज विश्व स्तरों के आस-पास भी नहीं हैं। वर्ष 2011 में अपनी एक भी आई.आई.टी. क्वैकोरैली साइमंड्स 'क्यू.एस.' वर्ल्ड यूनिवर्सिटी रैंकिंग्स के टॉप 200 में भी शामिल नहीं थी। ऐसा क्यों है? दूसरे विश्व युद्ध के बाद भारत में औद्योगिक विकास के उद्देश्य से उच्च तकनीकी संस्थाएं स्थापित करने के लिए 1946 में एक 22 सदस्यों की नलिनी रंजन सरकार समिति गठित की गई थी। आई.आई.टी. इसी समिति की कल्पना है। समिति ने सिफारिश की थी कि अमेरिका की मैस्टच्यूटस इंस्टीट्यूट ऑफ टेक्नोलॉजी 'एम.आई.टी' की तरह भारत में भी इंस्टीट्यूट स्थापित किए जाएं, जिनसे अन्य संस्थाएं सम्बद्ध हों। इन सिफारिशों के तहत खड़गपुर, बॉम्बे, कानपुर व मद्रास में 4 आई.आई.टी. स्थापित की गईं। आई.आई.टी. दिल्ली की स्थापना बाद में 1961 में हुई। रूड़की व गुवाहाटी को इसके भी कई दशक बाद आई.आई.टी. के रूप में स्वीकार किया गया। आई.आई.टी. खड़गपुर इस शृंखला में सबसे पहली थी और इसका आरंभ मई 1950 में ईस्टन हायर टेक्नीकल इंस्टीट्यूट के नाम से हुआ। यह एम.आई.टी. के सहयोग से स्थापित की गई थी। लेकिन जब 18 अगस्त 1951 को इसका औपचारिक उद्घाटन हुआ तो उससे पहले ही इसे इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी नाम दे दिया गया था। आई.आई.टी. बॉम्बे की योजना 1957 में यूनेस्को के सहयोग से आरंभ की गई और इसमें यूनियन ऑफ सोवियत सोशलिस्ट रिपब्लिक्स 'यू.एस.एस.आर.' का भी योगदान था। इसे 1956 से 1973 तक यू.एस.एस.आर. का उपकरण व विशेषज्ञ सेवाओं के रूप में असाधारण सहयोग मिलता रहा। यूनेस्को ने भी अनेक फेलोशिप ऑफर की ताकि भारतीय फैकल्टी सदस्य यू.एस.एस.आर. में ट्रेनिंग पा सकें। इस एड प्रोग्राम को यू.एस.एस.आर. से अतिरिक्त समर्थन व सहयोग मिल रहा था। आई.आई.टी. कानपुर का आरंभ दिसम्बर 1959 में हुआ और अपने पहले 10 वर्ष में उसे कानपुर इंडो-अमेरिकन प्रोग्राम से बहुत लाभ मिला, जिसके तहत अमरीका के 9 विश्वविद्यालयों-एम.आई.टी., यूनिवर्सिटी ऑफ कैलिफोर्निया बर्कले, कैलिफोर्निया इंस्टीट्यूट ऑफ टेक्नोलॉजी, प्रिंस्टन यनिवर्सिटी, कार्नेगी इंस्टीटयट ऑफ



हमारे देश की एक भी आई.आई.टी. आज विश्व स्तरों के आस-पास भी नहीं हैं। वर्ष 2011 में अपनी एक भी आई.आई.टी. क्वैकोरैली साइमंड्स 'क्यू.एस.' वर्ल्ड यूनिवर्सिटी रैंकिंग्स के टॉप 200 में भी शामिल नहीं थी। ऐसा क्यों है? दूसरे विश्व युद्ध के बाद भारत में औद्योगिक विकास के उद्देश्य से उच्च तकनीकी संस्थाएं स्थापित करने के लिए 1946 में एक 22 सदस्यों की नलिनी रंजन सरकार समिति गठित की गई थी। आई.आई.टी. इसी समिति की कल्पना है।

टेक्नोलॉजी, यूनिवर्सिटी ऑफ मिशिगन, ओहाइयो स्टेट यूनिवर्सिटी, केस इंस्टीट्यूट ऑफ टेक्नोलॉजी व परडी यूनिवर्सिटी-ने शोध प्रयोगशालाएं व ऐकेडमिक कार्यक्रम स्थापित करने में मदद की। आई.आई.टी. कानपुर भारत में पहला इंस्टीट्यूट है जिसने अगस्त 1963 में कम्प्यूटर साइंस पाठ्यक्रम ऑफर किया था। आई.आई.टी. मद्रास उस समय आरंभ हुई जब फेडरल जर्मनी ने पहले इंडो-जर्मन समझौते पर 1959 में बॉन में हस्ताक्षर किए। इस समझौते के तहत इसे जर्मन प्रोफेसरों की सेवाएं, भारतीय फैकल्टी सदस्यों के लिए ट्रेनिंग सुविधाएं व साइंटिफिक और टेक्नीकल उपकरण उपलब्ध कराये गये ताकि सेंट्रल वर्कशॉप व प्रयोगशालाएं स्थापित की जा सकें। इस इंस्टीट्यूट को 1961 में 'राष्ट्रीय महत्व का इंस्टीट्यूट' घोषित किया गया। ब्रिटीश सरकार के सहयोग से 1961 में दिल्ली में 'द कॉलेज ऑफ इंजीनियरिंग एंड टेक्नोलॉजी' स्थापित किया गया जिसे बाद में राष्ट्रीय महत्व की संस्था घोषित किया गया और 1963 में इसका नाम बदलकर इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, दिल्ली कर दिया गया। आई.आई.टी. गुवाहाटी की स्थापना 1995 में हुई और 2001 में रूड़की विश्वविद्यालय को आई.आई.टी. में परिवर्तित किया गया। खड़गपुर में सबसे पहली आई.आई.टी. की स्थापना को 6 दशक बीत गए हैं। इसलिए यह समीक्षा करना अनिवार्य हो जाता है कि इन संस्थाओं ने क्या उन लक्ष्यों को हासिल कर लिया है जिनकी कल्पना इनके संस्थापकों ने की थी? इन संस्थाओं से उम्मीद थी कि यह शिक्षा के विश्व स्तरीय केंद्र बन जाएंगे, लेकिन अफसोस की बात यह है कि देश में एक भी आई.आई.टी. विश्व स्तर के आस-पास भी नहीं है। सातों में से एक भी आई.आई.टी. क्यू.एस. वर्ल्ड यूनिवर्सिटी रैंकिंग्स-2011 में पहले 200 स्थान में भी जगह नहीं पा सकी। आई.आई.टी. बॉम्बे एकमात्र भारतीय संस्था थी जो वर्ष 2010 में टॉप 200 में शामिल थी, लेकिन इस साल वह भी 38 स्थान फिसलकर 225वीं रैंक पर पहुंच गई है। इसी तरह दिल्ली व मद्रास जो 2010 में क्रमशः 202 व 262वें स्थान पर थीं, अब फिसलकर 218 व 281वें स्थान पर पहुंच गई है। देश की जो बाकी आई.आई.टी. हैं यानि कानपुर, खड़गपुर, रूड़की व गुवाहाटी, वह तो वर्ल्ड यूनिवर्सिटी रैंकिंग्स में टॉप 300 में भी शामिल नहीं हैं। क्यू.एस. रैंकिंग हर वर्ष की जाती है और इनका आधार एम्प्लॉयर व अकादमिक सम्मान व रिसर्च क्वालिटी है। हाल के दिनों में यह प्रयास किया गया है कि आई.आई.टी. सिस्टम से अधिक से अधिक छात्रों को परीचित कराया जाए। इसलिए 8 अन्य आई.आई.टी. स्थापित की गई हैं-भुवनेश्वर, गांधीनगर, हैदराबाद, इंदौर, जौतपुर, कानपुर, पटना व रोपड़। सकारात्मक पहल के तहत कमजोर वर्गों को प्रवेश व फैकल्टी में नियुक्ति के लिए रियायतें दी गई हैं। संयुक्त प्रवेश परीक्षा 'जे.ई.ई.' को अन्य इंजीनियरिंग कॉलेज को साथ लेकर आयोजित की जा रही है। लेकिन सोचने की बात यह है कि क्या ऐसे कदम भी उठाए जा रहे हैं जिनके जरिए आई.आई.टी. विश्व स्तरीय संस्था बन सके? दरअसल कोई भी संस्था विश्व स्तर की उसी समय बन सकती है जब उसमें योग्य फैकल्टी हो, आधुनिक सुविधाएं हों और छात्रों में स्तरीय रिसर्च करने का हौसला व लगन हो। यह छात्र कोचिंग इंस्टीट्यूट का सहारा लेकर प्रवेश परीक्षा को क्रैक कर जाते हैं, लेकिन उनमें मौलिक सोच का अभाव होता है। वह इंजीनियरिंग को कॅरिअर के रूप में ग्रहण करने के इच्छुक भी नहीं होते। यही वजह है कि गैर इंजीरियरिंग कंपनियों में नौकरी करने लगते हैं। इन छात्रों को तो बस अपने पोर्टफोलियो में आई.आई.टी. का लेबल चाहिए। ऐसी स्थिति में स्तरीय शोध् की कल्पना इन छात्रों से नहीं की जा सकती।

इंजीनियरिंग उन चंद क्षेत्रों में से है जिनमें आवश्यक इंटर्नशिप नहीं होती जैसा कि मेडिसन, लॉ व सी.ए. में होती है। यह भी एक वजह है जिससे छात्रा इंजीनियरिंग् की सम्पूर्ण सुंदरता व संभावनाओं से परीचित नहीं हो पाते। ऐसी स्थिति में वह विश्व स्तरीय शोध करने में कोई दिलचस्पी नहीं दिखाते। नतीजतन आई.आई.टी. को वह रैंकिंग नहीं मिल पाती जिसकी उम्मीद की जाती है।

IIT-B alumnus gifts $1 million fellowship to Cornell varsity

Bhavya Dore

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MUMBAI: A former student of the Indian Institute of Technology, Bombay (IIT-B) has gifted a $1million fellowship to his other alma mater, Cornell University in the US, to support students at the department of biomedical engineering.

Rajiv L Gupta, who completed a masters degree in operations, research and information engineering from Cornell in 1969, has established Phool Prakash and Rukmini Sahai Graduate Fellowship Endowment, according to a news item dated July 27 on the Cornell University website. The fellowship has been created in honour of his parents.

Gupta completed a bachelors' degree in mechanical engineering from IIT-B in 1967, following which he joined Cornell.

"This gift will have a profound impact on our biomedical engineering programme by enhancing our resources and ability to attract and develop the most promising new scholars in this critical field of study and practice," said Lance Collins, the Joseph Silbert dean of the College of Engineering, in a news item in the "Cornell Chronicle" posted on the university's website.

Indian education in state of emergency: Amartya Sen

Amartya Sen with Shekhar Gupta and Prof Sugata Bose at IIC on Monday. RENUKA PURI

EXPRESS NEWS SERVICE
NEW DELHI, JULY 30

COMMENTING on the state of education and other human development indices in India, Prof Amartya Sen on Monday likened it to a state of 'emergency'.

The Nobel laureate pointed out that not only Japan and Korea but also other South Asian countries like Singapore, Hong Kong and Thailand have taken a lead in providing quality education to their people. "While they took a lead... we were left behind and we have paid a huge price for it. While Indians generally do well on high skills related jobs/issues like IT, in the middle skill segment we are very bad. This shows how the fruits of the economy are not widely shared... there is a state of emergency in terms of malnutrition and other aspects of human development. From being the second best in South Asia on the human development index, we are now the second worst and that too thanks to Pakistan. Bangladesh has also overtaken us on most indices," he said.

Sen was speaking at a deliberation on the Nalanda University moderated by Shekhar Gupta, Editor in Chief, *The Indian Express*.

Prof Sen, Chancellor of Nalanda International University, along with Prof Sugata Bose of Harvard University, shared his vision for the university.

"Eight hundred years ago the Nalanda university thrived in Bihar and then there was a hiatus... there is a challenge in reviving it and we have the determination to do so. Bihar government has been very speedy...Even though we did not expect it, they have made available to us a temporary building to start our campus... there is a visionary group in Bihar, headed by the Chief Minister, that wants the university to come up well and they are very supportive as is the Government of India," Sen said.

Bose, who is a member of the Board of Governors of the university, said it has been decided that two schools — School of Ecology and Environmental Studies and School of Historical Studies — will take off first. The two schools will take off in July 2014, said Bose. The university will later this year hold an international design competition to develop the master plan and buildings for the two schools. The varsity will come up at a 467 acre site near the Rajgir hills.

Virat Vaibhav ND 31/07/2012

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मरते दम तक अन्ना का साथ देने को उतारू हैं आईआईटी छात्र

नई दिल्ली, विराट न्यूज। अन्ना के आंदोलन को समर्थन देने के लिए आईआईटी दिल्ली के छात्र भी पीछे नहीं है। 25 जुलाई से शुरू हुए अन्ना आंदोलन को समर्थन देने के लिए आईआईटी दिल्ली के छात्र अपनी पढ़ाई छोड़कर अनशन पर बैठे हुए हैं। अनशन पर बैठे छात्रों को कहना है कि भ्रष्टाचार को खत्म करने के लिए वह पूरी तरह से अन्ना के साथ हैं। जब तक जनलोकपाल बिल पास नहीं हो जाता, वे यहां से नहीं हटेंगे।

इसके लिए चाहे उन्हें अपनी जान ही क्यों ना गवानी पड़े। 25 जुलाई से अरविंद केजरीवाल व अन्य लोगों के साथ अनशन कर रहे आईआईटी, दिल्ली के बीटेक थर्ड ईयर के छात्र अनिल कुमार ने बताया कि उनमें अभी एक महीना ओर अनशन करने की हिम्मत है। क्रप्शन को हटाने के लिए वह अपना सब त्याग कर यहां आए हैं। उन्होंने देशवासियों से अपील की है कि भ्रष्टाचार को खत्म करने के लिए लोग अन्ना का साथ दें। अनिल ने बताया कि यदि जनता सड़कों पर उतर आई तो सांसदो को जनलोकपाल बिल पास करने के लिए मजबूर होना पड़ेगा। उसने बताया कि वह मूल रूप से यूपी के सहारनपुर का रहने वाला है। उसे परिवार को पूरा समर्थन मिल रहा है। धरना स्थल पर अन्ना को समर्थन देने आए आईआईटी दिल्ली के छात्र मुकेश ने बताया कि अन्ना का आंदोलन पूरे देश में फैल चुका है। रविवार को पांच आईआईटी जिनमें मुंबई, कानपुर, रूड़की और दिल्ली आईआईटी के छात्र अन्ना को पूरा समर्थन कर रहे हैं। कानपुर और रूड़की से रविवार को 40-50 छात्रों का जत्था आया था।

छात्र अपने-अपने जगह अन्ना को समर्थन कर रहे हैं। बीटेक फर्स्ट ईयर के छात्र ने बताया कि जो लोग यह सोचते हैं कि टाइम नहीं है, उन्हें भ्रष्टाचार के खात्मे के लिए समय निकालना चाहिए। उसने बताया कि वह 25 जुलाई से हर रोज अन्ना कोक समर्थन देने जंतर-मंतर आ रहे हैं। छात्र प्रेस ने बतायिं कि सरकार ने जनलोकपाल को लेकर कई बार धोका दिया। अब जनता का दबाव ही कुछ कमाल दिखा सकता है।■

Economic Times ND 31/07/2012

P-16

HRD Ministry in Huddle after Plan Panel Nixes New Varsities

URMI A GOSWAMI
NEW DELHI

The Planning Commission's decision against setting up new colleges and universities in the Twelfth Plan period except under "exceptional circumstances" has scurried HRD ministry back to the drawing board.

The immediate casualties of this decision are a central university in Uttar Pradesh, and in Maharashtra (Amravati), an IIT in Palakkad and another centrally-funded technical institute in Kerala. The Plan panel's argument is that the ministry should focus on "consolidation and not expansion" in the Twelfth Plan period as there is already a "huge liability" from the proactive expansion in the Eleventh Plan period.

The Eleventh Plan had envisaged large scale expansion of the higher education sector—30 central universities, eight IITs, eight IIMs, ten National Institutes of Technology, 20 Indian Institutes of Information Technology, three Indian Institutes of Science Education and Research, 74 degree colleges in backward areas.

Plan panel argues that the ministry should think about consolidation and not expansion in the twelfth Plan period

Sources in the Planning Commission stressed that the ministry needs to think through its proposals for setting up new central institutions. "There is a serious resource crunch, the fact is that there are no funds for new institutions.

The focus should be on implementing the massive expansion plan that the government committed itself for the Eleventh Plan. Consolidation should be the mantra of the Twelfth Plan. New institutions can be considered under exceptional circumstances," a senior official said.

The ministry is now working out criteria that would define "exceptional circumstances". Once it does so, it will re-submit the four proposals. For the time being, the "exceptional circumstances" criteria appears to be a convenient way of putting proposals on the back burner.

However, unwritten factors like pressure, or political contingency would clearly be explained away as "exceptional circumstances". The recent decision to set up two central universities in Bihar clearly falls into this rubric—provision had been made for only one university in the plan.

Even as the Plan panel has left the door open for such contingencies, it is clear that the old system of setting up new institutes without actually building up the older ones will not be acceptable. "Existing ideas have to implemented, and these should not suffer from shortage of funds. It would make more sense to focus on quality and expand where and when it is really required," an official said.

The plan panel's stance is in line with its approach to the Twelfth Plan—"there must be a strategic shift from mere expansion to improvement in quality higher education. For this, the focus should be not only on larger enrollment, but also on the quality of the expansion."

Innovation is not just patents and 'jugaads'

CHANDRA MOHAN

SEEING that innovation is a key index of developed societies, creation of a climate which fosters innovation was one of the key missions for the Knowledge Commission chaired by Sam Pitroda. Participation of both the Prime Minister and Finance Minister in a National Conference on Innovation last year reflected the priority. Announcements at this conference included establishment of a net-based "national knowledge network" and liberal funding of innovation. Large funds have already been placed at the disposal of every State Council of Technology, out of which Rs 1 crore has been passed on to each district. Following standard government practice, deputy commissioners have been assigned the responsibility for nurturing innovation in districts. The commission's report specially commended our 'jugaad' culture.

It is high time we realised that innovation is far beyond ideas, patents or even jugaad's. Ideas and patents are both mere dreams. Patent only provides legal protection to the commercial interests of the originator. Jugaad, for which Indians, Punjabis in particular, are globally recognised, are low-cost shortcuts for meeting exigencies. One of its most quoted examples is Punjab's famous "Maruta" of the Seventies, which lasted for nearly 30 years. A 5hp engine mounted on a Jeep-chassis condemned by the Army became a multi-purpose public transport, portable pumpset, thresher driver, etc, for farms. Every component was a local contraption or from the scrap heap. Thousands plied on Punjab and Haryana roads. It was the only rural transport after dark during Punjab's decade of terrorism. While the Maruta certainly filled a public need, it flaunted every public motor-vehicle Law: lighting, braking distances, direction indicators, reliability. Every poor developing society comes up with such cheap jugaads: Jeepney of the Philippines or power-tillers of Thailand.

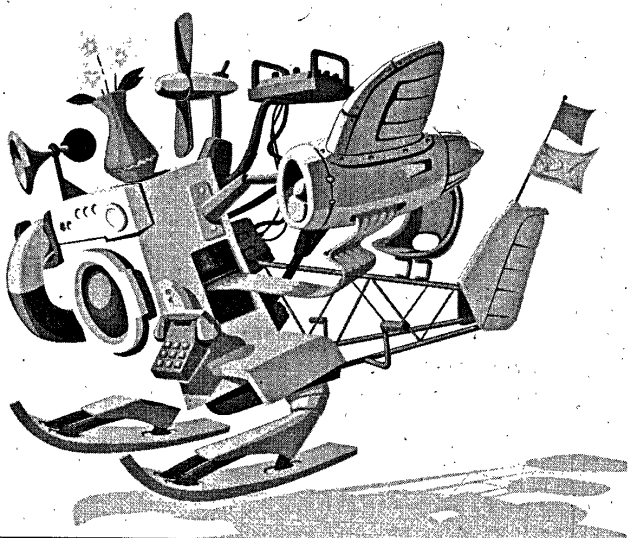
A list of thousands of jugaads was also compiled by Prof Anil Gupta of IIM-Ahmedabad via a village-level initiative through Gujarat called GIAN (Grassroots Innovation Augmentation Network) in the early Nineties. Liberally supported by the Department of Science and Technology, it has led to the creation of the National Innovation Foundation (NIF) to help upscale these innovations into commercial products. IIT-Mumbai has been roped in for engineering support. Anntual conferences of the NIF have also been held with great fanfare. But the impact of this entire effort is insignificant.

Let us remember that innovation by its definition is "something different which makes an impact on society."

Making an impact on society broadens the scope to including social innovations that have no commercial value. Bangladesh's Grameen Bank of Mohammad Yunus, Sulabh Shauchalaya of our own Bindeshwari Pathak of Bihar are examples of outstanding social innovations.

Innovation, therefore, includes the long, arduous and risky slog of giving life and rearing the foetus into a successful adult that has an impact on society. This second leg is obviously far more difficult: there are unknown risks, unforeseen hurdles, soiling of hands, frustrations and disappointments galore.

The US and Germany have become global leaders of innovation not by disjointed kneejerk measures but creating a total environment that nurtures, mentors, educates and, finally, finances talent



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Treacherous road

The worst part is that the innovator's struggle does not end with a successful launch. It is lifelong and there is never a moment of respite. A competitor could knock it off that pedestal at any time, with a 'cooler' product. Could you have ever imagined the century-old global icon Kodak being knocked out bankrupt by digital photography?

Tata Nano illustrates the risks. With all the resources of Tata Motors, Chairman Ratan Tata's vision of a Rs 1-lakh car mooted in 1996 matured into the frozen-design Nano only in 2006 and first commercial sale in July 2009 — 13 years of effort and thousands of crores of risk-investment in converting that dream into a deliverable shape. Priced at 50 per cent of competing models, Nano was hyped globally as the entry-level car for the rising middle-class of developing countries. But Nano too is facing hurdles with sales dropping.

Nano's protracted struggle has given competitors enough time to ready their models. Today's globally-exposed customer seeks 'total oomph'. Lowest price alone is not enough.

Another recent example is the computer tablets, for which our present market of 80,000 is expected to grow to 15 million by 2015. The Akash tablet developed by Datawind — an NRI company of Canada — and priced at Rs 2,500 hit national headlines last year. Its Indian launch at a subsidised price of Rs 1,800 for student buyers was announced by Human Resource Development Minister Kapil Sibal with great fanfare. Quantities in millions were touted. Technical glitches in the first trial order of Jaipur University unfortunately destroyed the euphoria. Half a dozen global players spanning the entire feature and price spectrum ranging from Rs 3,000 of Ubislate to the global heartthrob Apple at Rs 29,000 have in the meantime joined the fray. Datawind has been left holding the can. Failure is a lifelong stigma in India.

Total ecology

It is high time we realised that flowering of innovation is not disjointed kneejerk steps. It needs creation and nurturing of a total ecology. Why and how did Stanford become the unchallenged magnet of innovation in the US? How has Germany fostered hundreds of family-owned medium-scale companies to become global leaders of innovation in their field and made Germany an economic powerhouse?

Stanford's romance with innovation began with the post-war establishment of HP by Bill Hewlett and Dave Packard in a campus garage for making new electronic instruments for its labs. Spiralling post-War industrial demand for electronic instruments soon turned HP into a global powerhouse. Scientists that they were, Bill and Dave helped young entrepreneurs freely in their tinkering. The university provided the ground to experiment and later, even some seed money. Nurtured closely by both, this informal partnership flowered into a magnet for innovators. By the Eighties, faculty began to understand the nuances and risks of business, and private venture finance from across the US flooded in to join the party. Financial success emboldened higher risks and turned Stanford into a Mecca for innovation.

Strength of German medium businesses is rooted in the century-old partnership between higher education and industry forged by Robert Bosch. These family-owned businesses have not only survived two World Wars, but grown into unchallenged global leaders of technology.

In like fashion, our edifice of innovation will be successful only if it is founded in an un-tinted understanding of ground realities — which have been bred by an age-old culture wherein prayer and renunciation are the salvation of life, dirtying of hands is infra-dig and meant for inferior mortals; education, even technical, is totally theoretical and by rote; and faculty, even for higher technical education, has zero contact with industry and application. Torch-bearer IITs are no different.

It is unfortunate that this culture of isolation has also permeated deep into our CSIR and defence labs. Scientists live in their isolated ivory towers with no interaction with industry. Projects, therefore, stretch on and on; cost-effective commercial production figures nowhere.

Fertile ground

Radical change in governance, recruitment and promotion policies of institutions of higher technical education and national labs would alone pull them out of this groove. Creation of a ground fertile for innovation would require:

- Access to a large number of young students of higher technical education to select those with entrepreneurial potential to deliver their innovations.
- Ability to access mentors in a wide array of fields to guide, help and monitor innovators as they work on converting their dreams into reality. Their needs change from day to day: CA today, an architect tomorrow, a marketing specialist day after and, an industrial engineer a day later.
- Capability to organise practical courses in all facets of business: structures, organisation and management; accounting; marshalling resources, etc.
- Financial resources for Angel-funding.
- Connect to private venture capitalists (VCs) for Tier-I finance and beyond. Necessity of private VCs needs special emphasis. Risk-shyness in any government venture capital is inevitable (public accountability breeds it). There could be no better example than the Technology Development Board set up under the Department of Science and Technology in 1996 to spur research and development (R&D) and innovation. It has no shortage of funds since all monies collected through the R&D cess on imported technology (Rs 2,300 crore till FY-2010) are at its disposal. Despite being composed by the cream of India's R&D community and three eminent industrialists, its total disbursement till last year was only Rs 890 crore, divided among 233 projects. Only one case of Rs 9 crore in equity; Rest all in soft loans.

Since even an entrepreneurial society like the US has only been able to create an innovation ecology at a few places, and India is too vast and diverse, the best course would be to begin with pilot initiatives in technical institutions which proven connect with industry, and learn our way to success. Experiment can be refined and escalated as we learn. Creation of 150+ successful entrepreneurs in first four years should be the objective of each institution. To my judgment, a grant of Rs 3 crore to each institution should be adequate to set the ball rolling.

PTU's first advanced school in Mohali (dedicated to 'total quality management' (TQM) and entrepreneurship) is one such institution. Its connect with over 500 industries is well known. The historical link of PSG Institute in Coimbatore with industry is again renowned. Deeper search will reveal more such examples.

Pilot experiments are the tools for entering a new domain. Let us not be in a hurry, and adopt the well-trodden path.

The writer, a technologist and entrepreneurial professional, retired as Managing Director of the Mohali-based Punjab Tractors in 1997.

Indian Express ND 31/07/2012 P-10

M.M. ANSARI

Miles to go

The rot in the distance education system runs deep

IT COMES as no surprise that a former vice-chancellor of Indira Gandhi National Open University (IGNOU) and chairman of the distance education council (DEC) has been chargesheeted by the Central Bureau of Investigation (CBI). According to reports, the VC allegedly granted approval to certain universities to offer distance education courses in violation of the norms, allowing them to make huge profits.

What is astonishing, however, is that a single person has been identified for trial and punishment. A large number of individuals and institutions are associated with the corrupt management of self-financing open and distance learning (ODL) institutions, which generate considerable surplus from the fees paid by poor learners.

Education and training undoubtedly have significant socioeconomic value. Fourteen monomode open universities and 220 dual-mode conventional universities are in the business of providing all types and levels of education. They have established teaching shops in almost every nook and corner of the country to cater to the needs of higher education aspirants. Together they offer thousands of programmes and enrol millions of students, largely from variously deprived groups.

Due to flexibility in the policy on admissions, conduct of contact classes, examinations and fee structure, these institutions attract a large number of students and earn huge profits because of the economies of scale. There is enough scope for making private gains at the cost of the poor.

Unfortunately, ineffective monitoring and evaluation of the quality of teaching means the educational attainments of students are very low. That is why ODL institutions produce so many unemployable graduates, dragging down the productivity of resources.

Regulatory bodies, mainly the University Grants Commission (UGC), the All India Council for Technical Education (AICTE) and the DEC-IGNOU, remain oblivious to the current practices of ODL institutions. Governments, both at the Centre and the states, are well aware of the commercial activities of such institutions. They have deliberately encouraged these institutions to widen the access to educational programmes, from elementary to higher education, just to minimise the burden of financing the conventional system of education.

It is an irony that education of the poor is largely self-financed whereas education of more affluent sections of society is heavily subsidised.

It is an irony that education of the poor is largely self-financed whereas education of more affluent sections of society is heavily subsidised. In a research study entitled *Economics of Distance Higher Education* (1992), I raised three issues. First, the money paid by highly motivated distance learners, many of whom belonged to deprived sections of society, was utilised for purposes other than meeting the requirements of quality education. Second, the money collected from students of poor families was diverted to subsidise the education of students who were more well-off and belonged to the conventional system that was highly subsidised already. Finally, in many institutions, the tuition fee charged for different programmes was much higher than the per unit cost of education. It was concluded that the distance education system in the country is highly inequitable without being efficient in the delivery of educational services. In the two decades since the study was published, the cost and finance aspects of the education system has worsened due to the commercialisation of all types and levels of education. Rampant corruption in the functioning of the education system may be attributed to this.

Needless to say, corruption in the functioning of regulatory bodies like the Medical Council of India (MCI) and AICTE has already been exposed as senior officials from these bodies are either behind the bars or facing criminal charges. The malpractices in the functioning of DEC-IGNOU have also been highlighted in the recent revelations.

Against this backdrop, the Central government faces the challenge of weeding out corruption from the functioning of educational systems. It must also lay down a strong institutional foundation to increase the responsiveness of the education sector to the manpower requirements of the knowledge economy.

Several things need to be done. The ODL institutions should not be allowed to operate beyond their defined territorial jurisdiction and offer programmes that are commonly available at recognised institutions located near the learners. In case of overlapping jurisdiction, the government should issue necessary directions to clarify the rules of the game. Duplication of efforts, with ODL institutions offering common programmes, should be avoided. Teaching shops that are established without accreditation by a credible body should be closed. The policy of diverting funds collected from distance learners to further subsidise the education of regular students in dual mode universities should be stopped. Norms of quality assurance should be adhered to. In fact, the benefits of financial surplus should be shared and passed on to distance learners, who largely belong to underprivileged families. A thorough review of the academic and financial management of ODL institutions must be made so as to ensure equity and efficiency in the delivery of services.

The writer, a Centre-appointed interlocutor on J&K, is also former director, distance education council, IGNOU

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