LEAVE IITs ALONE
UGC meddling is unacceptable

CLOSE on the heels of the imbroglio over the graduate course at Delhi University, the University Grants Commission has managed to trigger yet another controversy in its dealings with the Indian Institutes of Technology — the holy of holies in the academic circuit. At the core of the latest stand-off is the autonomy of the IITs, embedded in the Institutes of Technology Act, one that the UGC, as regulatory authority, appears to have grudgingly accepted... but apparently up to a point. Well might the commission claim that it is guided by the UGC Act of 1956. But close to 50 years after that legislation in Nehruvian India, there is no call for the commission to insist on a say in the matter of IIT degrees. The UGC is not merely overbearing; its approach flies in the face of the certitudes of institutional autonomy. In a sense, it questions the degrees and their duration as offered by the IITs when it underlines its advice that the “degrees should be generally recognised, globally acknowledged and widely accepted”. Does it harbour any doubts on this fundamental matrix? Small wonder that the IIT circuit is astonished at the wording of the UGC’s gazette notification. Just as the commission functions on the basis of a parliamentary Act, so too are the IITs governed by the Institutes of Technology Act, 1961. Several decades later, the Acts leave no scope for punctured egos; of a kind that impeded the functioning of Delhi University at the threshold of this year’s admission season.

Is the UGC under instructions of the new dispensation headed by Smriti Irani to curtail the autonomy of IITs and IIMs as the NDA had attempted more than a decade ago when Murli Manohar Joshi was HRD minister? If the parameters then were the composition of faculties and the fee structure, this time around the UGC is meddling in a critical segment — the coursework — and verify the bedrock of the worldwide renown that has traditionally been the proud boast of the IITs. The Prime Minister would do well to rein Mrs Irani in, favourite though she may be of the establishment. The nub of the matter must be that the IITs are traditionally entitled to frame the curricula without the need to seek approval of the UGC. As much is the gist of the communication from the Director of IIT, Kharagpur, to the HRD ministry. The interest of students is at stake, and this must transcend the bruised ego of the UGC and the collective grandstanding, as witnessed at Rashtrapati Bhavan on Friday. The President cannot be unaware of the interference in the functioning of the IITs and the courses on offer... clothed in the language of a gazette notification. This is quite unacceptable.
IIT-Kharagpur fetes ‘conman’, later files FIR

Biswa Brata Goswami

MIDNAPORE, 23 AUG: In a queer case, IIT Kharagpur felicitated a person, who claimed to be an alumnus and Director, Corporate Finance at Deutsche Bank, but soon came to know from various sources that he was a conman. He was felicitated during the IIT’s 63rd foundation day celebrations on 18 August.

The man - Vijay Kumar, who also claimed to be an ex-Vice President of Microsoft, an alumnus of IIT Kharagpur (2003 batch) from E&CE Department and IIM, Ahmedabad (2005 batch) even proposed to donate Rs 1.56 crore towards some Institute initiatives which were announced by the Institute at the foundation day function.

Later, the IIT authorities received information from various sources alleging that the credentials of this person appear to be questionable and false. Accordingly, IIT Kharagpur filed an FIR with local police authorities urging them to investigate the identity and credentials of this person.

The incident comes at a time when the IIT, KGP authorities are planning to set up a sophisticated digitalised ‘Hall of Fame’ to document the evolution of the IIT system and record contributions of everyone associated with it. To make the people and IITians aware of the fraudster, the institute’s registrar Mr T K Ghosal put up the fact in the notice board urging “all concerned not to be influenced by any projected details or any presentation on the association of this individual with IIT Kharagpur”. When asked Mr Ghosal said, “The man first approached us claiming to be an alumnus. As we always give special treatment to our alumni, we announced his name in the function where he proposed to donate a huge sum of money towards some Institute initiatives. Later, we were alerted about his credentials from our sources and then we filed a complaint against him with the local police authorities”.

Ms Bharati Ghosh, SP, West Midnapore said, “We have received a complaint from IIT authorities and have started a probe into the matter. We are trying to establish his real identity and locate his whereabouts. But, it is also surprising how did the IIT authorities felicitate a man without checking his credentials and identity?”

As soon as news spread in the IIT faculties, numerous mails were circulated among the IITians who later found that the man pulled off a similar scam some years ago. According to reports, the accused man, who allegedly posed as Microsoft Vice President and cheated several students by promising them admissions in IITs, was arrested in New Delhi in 2010.

He was apprehended from Najafgarh following investigations into a complaint filed by a victim Rajiv Ranjan Kumar from Bihar that he was cheated of Rs 3.11 lakh by the accused who promised admission to his son in IIT-Kharagpur.

During interrogation, it was revealed, Vijay Kumar used to target IIT aspirants and influence them by showing fake degrees and projecting him as an engineer and an IIT-Kgp topper.
Many techies have given up jobs to serve others

Students of technical colleges do different things in their spare time. Many are glued to their laptops in tune with their friends and family members through social networking sites while many others engage themselves in sports activities. Some prefer to head for a theatre or a shopping mall. But Akshay Mohanty and a few of his friends are different. They have formed a group called “We Care 4 You” to serve social service. Their passion for social work continued even after they passed out from their colleges as they turned the small group into a full-fledged non-governmental organisation (NGO) called “We 4 You”.

The Bhubaneswar-based NGO, which works in different fields, is unique as most of its 300 odd members are former students or those studying in different colleges in and around the Odisha capital. Many NGO members have given up their lucrative jobs to work full-time with the organisation. “A well-paid job will give you happiness for a day—day you get your monthly pay. But social service gives us happiness and satisfaction everyday,” said Parameswara Mohanty, the “We 4 You” secretary and a former student of a Bhubaneswar-based engineering college.

According to Mohanty, they had formed the small social service group in the college as they were interested in rights from their childhood. However, the idea to have a full-fledged NGO came in 2010 when they were heading a blood donation camp in a Bhubaneswar engineering college. The programme was a great success as out of around 650 members in the college, 15 turned up to participate in the camp. “It was very encouraging and we felt very happy. We decided to form a full-fledged NGO and We 4 You was born,” said Mohanty.

The NGO was registered in 2013. And Mohanty and his colleagues have not looked back since. Besides holding blood donation camps and organizing other social service activities, We 4 You is running a successful initiative called the “Red Express”. Under the programme, the NGO has prepared a data base of 5,000 people, mostly students, and ex-students of different colleges in the state who are always ready to donate their blood in emergencies. The programme runs 247 hours and these volunteers donate blood at regular intervals. Those who receive the blood include small children suffering from Thalassemia, said Chandrase Mohan Barai (24), another member of the NGO. In this context, he said that 10 per cent of the people who donate blood in cities like Bhubaneswar are students. “We 4 You is having another successful programme under which it produces audiobooks in CD format for visually impaired students,” informed Bhuvaneshwar Panda (23), another member of the NGO which has already distributed more than 2,000 audio books benefiting about 10,000 students. We 4 You, in fact, has begun an effort to set up a specialized unit in Bhubaneswar to produce audio books for the visually challenged students.

The NGO also runs awareness campaigns on regular basis for eye donation which has also become a big success. “People usually think that if one declares to donate his or her eye then after his or her death the entire eye Welfare removed. Very few people know that only eye ball or clear transparent tissue is removed. Hence, there is need for creating awareness on this,” said Bhuvaneshwar Panda, an intern who has also joined the NGO.

Other initiatives run by We 4 You include computer and spoken English programmes for underprivileged students, particularly in orphanages and slum areas. The activities and works of the NGO have already been appreciated by national and international agencies like the Indian Red Cross Society and UNICEF. The NGO has also been feted by the State Social Welfare Board, a government of Odisha agency.

However, despite receiving appreciations from the Odisha government, the members of the NGO group said that they were not keen to take any kind of financial assistance from any government agency. “There is a lot of procedural delay in obtaining funds from corporate and business houses based in the state. The NGO also organises fund raising events even from time to time. More importantly, we were not able to team up with the NGO during their college days and now working in different cities. People also contribute generously to the We 4 You. In fact, the Bhubaneswar-based NGO is now planning to expand its activities beyond the boundary of Odisha with the help of these professionals based in metropolitan like Mumbai, Pune, Bangalore and Hyderabad.

ST Bhusnuraman in Bhubaneswar

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33 days to Mars: Nine months after liftoff, Mangalyaan ready for final lap

Vanita Srivastava
letters@hindustantimes.com

NEW DELHI: When a month from now India’s Mars Orbiter Mission (MOM), better known as Mangalyaan, enters the red planet’s atmosphere, it will mark a giant leap for the country’s planetary research with a feat achieved by only three other space exploration agencies.

“33 days to Mars. MOM is just 9 million km away from Mars and 188 million km away from earth,” said the Facebook page of Indian Space Research Organisation (Isro) on Saturday.

On November 5 last year, Isro put Mangalyaan on an 11-month journey to find evidence of life on the red planet and position itself as a budget player in the global space race.

The spacecraft is slated to enter the Mars orbit on September 24 at 7.30 am.

“This is a very critical phase of the mission. Our mission controllers are going through ground simulations and rehearsals to respond to contingencies,” Isro chairman Dr. K Radhakrishnan told HT.

Probes to Mars have a high failure rate. Of the 51 missions so far, only 21 have been successful. A similar mission by China, which beat India to the moon, failed in 2011. Only the US, Europe, and Russia have sent probes that have orbited or landed on the planet.

CONTINUED ON PAGE 8

33 days to Mars

According to sources in the organisation, the spacecraft is now darting at 21-22 km/sec. The time taken for radio signals from earth to reach MOM and return is around 20 minutes.

A decision on whether another course correction is needed for the spacecraft will be taken around September 14.

The next big challenge is to reduce the velocity of the spacecraft to 1.6 km/sec by firing the Liquid Engine – that uses propellants in liquid form. The engine has been lying idle for the past 300 days and restarting it will be a test.

“The firing has to be done very precisely. When we reduce the spacecraft’s velocity, it should be close enough to Mars for it to be captured by the planet’s gravity,” an official spokesperson for Isro said.

Prime Minister Narendra Modi had said at the June 30 launch of PSLV C-23, “The story of our Mars Mission costing less than the Hollywood movie Gravity had gone viral on social media recently. Our scientists have shown the world a new paradigm of frugal engineering, and the power of imagination.”

Mangalyaan’s Rs 450-crore price tag is a sixth of the amount earmarked for a Mars probe that the US National Aeronautics and Space Administration (Nasa) launched 13 days later.
33 दिन में अपने गंतव्य पर पहुंच जाएगा मंगलयान

नई दिल्ली: सत्रियों से इस्तेमाल के लिए किया गया वह रहने के राहतों के राहतों नए पर 33 दिनों के लिए भेजा गया मंगलयान का महत्वपूर्ण मिशन "मंगलयान" अपने लाख से मारा 90 लाख किलोमीटर दूर है और अन्य 33 दिनों में वह अपने गंतव्य पर पहुंच जाएगा।

भारतीय अंतरिक्ष अनुसंधान संस्था के "मंगलयान" ने सुरंग दिवंगत पर यह जानकारी दी है कि "मंगलयान" में अन्य 33 दिनों में वह अपने गंतव्य पर पहुंच जाएगा।

मंगलयान ने अपने 33 दिन के लिए किया गया वह रहने के राहतों के राहतों के लिए भेजा गया मंगलयान का महत्वपूर्ण मिशन "मंगलयान" अपने लाख से मारा 90 लाख किलोमीटर दूर है और अन्य 33 दिनों में वह अपने गंतव्य पर पहुंच जाएगा।

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33 दिन में अपने गंतव्य पर पहुंच जाएगा मंगलयान

1. तप कार्यक्रम द्वारा 24 दिनों के अंतराल के साथ मंगलयान का अपने गंतव्य पर पहुंच जाएगा।
2. मंगलयान के स्वीकृति द्वारा 450 वर्ग किलोमीटर की व्यापकता के साथ मंगलयान का अपने गंतव्य पर पहुंच जाएगा।
3. मंगलयान के स्वीकृति द्वारा 700 वर्ग किलोमीटर की व्यापकता के साथ मंगलयान का अपने गंतव्य पर पहुंच जाएगा।

National Duniya ND 24/08/2014

एलिज़ा की खोज के करीब एक कदम और बढ़े वैज्ञानिक

पत्रिका: "दुर्दृष्टि" द्वारा प्रकाशित एलिज़ा की खोज के करीब एक कदम पर दो वैज्ञानिकों ने कुछ सुझाव दिए हैं।

रोबर्ट बाकर्टी: एलिज़ा की खोज द्वारा हंडी है जिसे 'एलिज़ा की जांघ की हड्डी' बताया जा रहा है।

तक्षिल: एलिज़ा की खोज के करीब एक कदम पर दो वैज्ञानिकों ने कुछ सुझाव दिए हैं।
Wrong for UGC to interfere, says author of IIT reforms roadmap

Written by Ruhi Tewari | New Delhi | August 25, 2014 4:14 am


Following the University Grants Commission’s communique to the Indian Institutes of Technology (IIT) asking them to “align their courses and degrees with the ones recognised by the UGC”, members of the Anil Kakodkar committee that was set up to recommend autonomy measures for IITs have hit out at the UGC, demanding that the premier institutes be “left alone”.

“IITs are governed by an Act of Parliament. The intention was to give maximum autonomy to them. The IITs are the best educational institutes in the country at this point and they should just be left alone. It is entirely up to them to decide how they want to move forward. They are completely out of the ambit of the UGC and what is happening now isn’t right,” Anil Kakodkar, noted nuclear scientist who headed the committee, told The Indian Express.

The 11-member Kakodkar committee was constituted by the Union HRD Ministry in 2010 to “recommend autonomy measures to facilitate IITs to scale greater heights”.

“At that point, the committee’s main objective was to see how the autonomy of IITs can be enhanced. The sense of the committee was that IITs have complete academic autonomy. But what is happening now seems to be a counter-indication which we didn’t see then. To use a saying, why fix what isn't broken,” Kakodkar said.

In its report, speaking of a strategy to take IITs to “greater level of excellence and relevance”, the Kakodkar committee had said, “Managing such a transition would naturally require complete autonomy so that IITs can adopt innovative and flexible management approaches to move forward on a promising new idea in a selective manner.”

The report said, “Towards enhancing autonomy that would provide the IITs the necessary flexibility to support and deal with a new idea or take a new initiative and lead them towards world-class excellence, it is proposed that each institute be fully governed by its Board of Governors (BoG), including aspects like financial planning and expenditure rules, faculty remuneration, fees and number of faculty and staff, within the overall policy guidelines of the IIT Council in terms of expectations from IITs as world-class institutions, affirmative actions, technology directions and human resource development.”

Another committee member, T V Mohandas Pai, also lashed out at the UGC for attempting to interfere with the functioning of IITs. “The UGC should just keep off IITs as well as other top 15 per cent of the higher educational institutes in the country. The track record of the UGC is hardly great, it isn’t as if it has the brightest minds to be able to tell others what to do. The IITs have done very well left to themselves, their management has been great. The IITs have to be left alone for them to develop and compete globally,” he said.

“What is happening now is perverse. It is time we stand up to such regulatory overreach
सुलझे तकनीक की गुट्थी

राष्ट्रपति और प्रधानमंत्री ने आईआईटी संस्थानों के शीर्ष पदाधिकारियों से जो कहा है, उसे ध्यान में रखकर एक नई शुरुआत की जा सकती है। उन्होंने कहा कि देश की तकनीकी जरूरत पूरी करने में ये संस्थान अपनी भूमिका निभाएं और ‘मेक इन हॉली’ या ‘डीड मेक हॉली’ की अवधारणा को जमीन पर उतारें। उन्होंने आईआईटी से देश में शिक्षा की गणवा सुधारने पर विचार करने को भी कहा। पिछले कुछ समय से आईआईटी की भूमिका को लेकर बहस किए गए हैं। इसकी स्थापना के पीछे अवधारणा तकनीकी सौंप को बढ़ावा देने की भी, जिससे देश के विकास के लिए जरूरी टेक्नॉलॉजी तैयार हो सकें। लेकिन पिछले दो-तीन दशकों से हम संस्थानों का दावा कुछ ऐसा बन गया है कि एक तरफ में अमेरिकी सोफ्टवेर कंपनियों के लिए सभी प्रशासनिक समाधान कर रहे हैं, दूसरी तरफ आईआईटी को नकदी साझा देते रहे हैं, जिनका तकनीकी विकास में रातों भर मौजूदा नहीं होता। इंजिनियरिंग के कई क्षेत्रों में पहुँच का सिलसिला उप पड़ा गया है। देश की मुकाबला, सड़क, प्लाइआउट और बंदरगाहों को जहराता है, लेकिन आईआईटी में स्वित्र इंजिनियरिंग की व्यावसायिक जी हो, नहीं तो यह नहीं बना सकता। विश्लेषक, तेल, खनन अर्थ के स्कॉल नहीं मिलते हैं। इंजीनियरिंग को लोगों के लिए निर्देशित करने के लिए सही माही पदों पर प्रशिक्षित कर रहे हैं। इस साल आईआईटी में पहली काउंसलिंग के बाद 650 सीटें खाली रह गई जबकि पिछली बार करीब 400 सीटें खाली थीं। वजह वस्तु बाहर है- हर किसी को कंप्यूटर साइंस पढ़ना है, क्योंकि दूसरे संस्करण में हम तकनीक की नौकरियों नहीं हैं। इस अहसास का संबंध सरकार की नीति से है। ग्लोबल ज्ञान के माहौल में जब से विदेशी चीजों का आयात ने और पकड़ा है, तब से अन्तर्द्देशी मैनपूर्ण तकनीक संस्करण का खंभा निकला जा रहा है, हालांकि इसको आयोगों कर नहीं ल्या जा सकता है। यह नीति ‘मेक हॉली’ कहने पर से कम नहीं है। इसके लिए बड़े पैमाने पर निवेश करना होगा, कारखाने खोलने के लिए इंस्ट्रक्टर उपलब्ध कराना होगा और विकास की प्राथमिकताएं बदलनी होंगी। इससे इंजिनियरिंग छात्रों को अपने लिए कई क्षेत्रों में गुजरात के बनती दिखेंगी। और गठबंधन में उतरने के लिए सरकार को देश क्षेत्रों में शोध को बढ़ावा देने के उपाय करने होंगे। अगर तो छात्रों को बेहतर इंजिनियरिंग और फ्लाइटल साइंस में रिसर्च के लिए कोई प्रोफेशनल मिल रहा है। आप जवाब देंगे इंजीनियरिंग और वैज्ञानिक के बिन्दुओं जाने की यह सबसे बड़ी वजह है। इससे बड़े विवेक क्या होगा कि हमारे इस लिए ही साइटेक्स दूसरे मूल्यों को तकनीकी रूप से समझा कर रहे हैं, लेकिन हमें छोटी से छोटी तकनीक भी बनाने से मौजूद मिल रही है। शोधकर्ताओं के लिए आर्थिक निवेश, आप देखें कि रिसर्च जीत का क्या स्थापना और अपने देश में विकसित होने वाली टेक्नोलॉजी के व्यावसायिक इस्तेमाल की व्यवस्था ही इस बीमारी का अकेला कारण है। त्यसक अकेला रहने के सामने हम बदलाव का रोडमैप पेश करना चाहिए। सरकार अगर उसे अगले में उतार सकी तो उसके लिए यह इतिहास का धारा मोड़ने जैसी उपलब्ध होगी।
President laments no Indian institute among the top 100 globally

Hindustan Times (Kolkata)

President Pranab Mukherjee has expressed serious concern over the low level of academic excellence in Indian institutes/universities compared to international benchmarks.

Speaking at the inauguration of Indian Institute of Engineering Science and Technology (IIEST), Shibpur, erstwhile BESU, on Sunday, Mukherjee lamented, “I am saddened and irritated by the fact that no Indian institutes could find a place in the top 200 institutes around the globe in academic excellence.”

The President was addressing the second convocation at Indian Institute of Science Education and Research (IISER), Bhopal where he had raised similar concern only a couple of months back.

Highlighting that India in 6th century with Takshashila to 12th century’s Nalanda University had commanded academic excellence globally, he said the current scenario in higher education has left him sad.

“In last 83 years, no research scholar from an Indian university has won Nobel prize after CV Raman. Scholars like Amartya Sen, Har Gobind Khorana, Chandrasekhar who are product of Indian universities, have obtained the Nobel Prize while working for foreign universities. It is worrying,” Mukherjee said.

The President said it is very sad and a matter of risk that India has to import both paper and ink for currency notes. “Through such imports there always lies high risk of production of fake currency, which might destroy the economy of the country. We should develop our expertise in these fields.”
Academic cooperation between institutions must be encouraged, he said. Research and innovation must go hand in hand and should be focused on solving our country’s myriad developmental problems, he felt.

“I do not mean that there is a lack of talent here or teachers cannot teach, but the benchmark has to be raised to global standards,” Mukherjee said.

Indian universities or institutes should create opportunities for the Nobel laureates of Indian origin to work with their motherland and not foreign universities, said the President.

**PRANAB VISTS NATIVE MURSHIDABAD**

President Pranab Mukherjee on Sunday took part in two programmes in Murshidabad before leaving for Kolkata. He inaugurated the new campus of Management Development Institute (MDI) at Talai crossing of Jangipur.

**Industries, IIT-Gn mull tie-ups to commercialise research products**

Vinay Umarji | Ahmedabad

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From designing user friendly dustbins to joint courses in automotive electronics, delegates from over 50 industries explored opportunities to tie-up with IIT Gandhinagar on Saturday.

In order to boost industry-academia collaboration, the institute had organised its first 'Industry Open House' which saw representatives from companies like Maruti Suzuki, Cadila Pharmaceuticals, Reliance Industries, Smart Grid Torrent, Adani, TCS, IBM and Hospira, as well as several academic and research institutes, including the Institute for Plasma Research, Mudra Institute of Communications Ahmedabad, Centre for Environmental Planning and Technology University, and Physical Research Laboratory (PRL) participate in the event.

"We run such courses with other institutes including other IITs and we can explore such a joint course in automotive electronics with IIT Gandhinagar," said Chaitanya Rajguru, associate vice president of Pune-based KPIT Cummins Infosystems Ltd.

The event showcased IITGN’s expertise, infrastructure and capabilities through presentations, posters, laboratory and
library visits, idea pitches, instrumentation and product demonstrations. The visitors interacted with the Institute's faculty, staff and students, as well as the officials of the Institute's Career Development Services and Continuing Education Program.

For instance, delegates from Heubach Colours were impressed by IIT-Gn's research in waste water treatment. On the other hand, collaboration process is also on between IIT-Gn and Sintex Industries for designing user friendly dustbins that could be used widely in cities and towns like Ahmedabad.

Delegates from pharma industry including Cadila Pharma and Century Pharma expressed their desire to leverage the institute's research in areas like nano technology for possible commercialisation in future.

"While IIT Gandhinagar is growing leaps and bounds in its research and innovation, it is us who know how to commercialise these products that emerge out of such research activities. We are exploring on such possible tie-ups," said a delegate from Cadila Pharma on condition of anonymity.

"Coming from an IIT myself I understand the importance and the value of the innovative initiatives which are being taken up at IIT Gandhinagar. I am also seeing top of the line laboratories here.... I will help leverage the products coming from IITGn and my researchers can work jointly with the Institute in various projects," said Janak Seth, an IIT Alumnus and Managing Director at Century Pharmaceuticals.

Anay Mashruwalla of Venus Engineering, which manufactures industrial valves, too came across one of the institute's project on Helium Gas Detector. "I have proposed to lend my support in the project," he said, adding that there is a major requirement for Helium Gas Detectors in the country in many industries. However, since the machine is not currently manufactured in India, it is very expensive.

"If IIT-Gn succeeds in developing the machine, it would help to significantly reduce its price," Mashruwalla added.

In addition to the opportunities for project tie-ups, the event also provided a platform for industry delegates to be exposed to the quality of IIT-Gn's faculty and students.

"For us, everything outside the campus is an industry. This includes society, community, and government and so on as well and we are open for opportunities everywhere," said Sudhir K Jain, director, IIT-Gn.

Harvard professor collaborates with IIT-Gandhinagar for affordable healthcare

Parth Shastri,TNN | Aug 25, 2014, 12.29 AM IST


AHMEDABAD: The general profile of the most deadly diseases in India is changing fast with a change in lifestyle and population profile. While today India battles with communicable diseases such as malaria and TB, the experts believe that in the next two decades, cancer and trauma will be bigger killers than communicable diseases. India already has more cancer patients than the US.
At the moment, the treatment for diseases such as cancer is beyond the reach of common man and thus, a team led by a Harvard professor is working on developing affordable medicine. Professor Shiladitya Sengupta, associated with Harvard Medical School and Massachusetts Institute of Technology, is collaborating with Indian Institute of Technology, Gandhinagar, (IIT-Gn) for the purpose. They are mapping the diseases that will emerge in future. A research is going on to develop devices that will help patients recover faster from trauma and brain injuries.

Prof Sengupta has received multiple awards and has been featured as one of the top 35 young innovators in the world by MIT's Technology Review Magazine. His work in nanomedicine is already undergoing human trials at the moment and is expected to reduce the cost and time in cancer treatment considerably. Prof Sengupta was at the IIT-Gn for the foundation program, where he taught first year undergraduate students on innovation and entrepreneurship.

"While we have been able to make treatment of malaria affordable, the diseases such as cancer are beyond the reach of the poor. The primary reason why the medicines are costly is due to the cost that the pharma companies incur in research and development for the patented drugs. We will have to start research right here in India, which can allow us to develop drugs at tenth of the cost of the US,. Traditional methods to treat cancer have toxic side effects as they take a carpet bombing approach. What we need is missiles that can directly target the affected part or the tumor.

" said Sengupta.

That’s why Sengupta is trying to fuse the discipline of medicine with technology. "While the population in the US and China is ageing, India today is a young nation. However, when it will reach the curve 20 years down the line, we would have surge of cases of various kinds of cancer, heart diseases and trauma cases. We will have to prepare for it in advance so that when we reach there, we will have affordable healthcare at hand. Thus, we have to start today," he said.

Sengupta intends to conduct a study of the current scenario and future predictions fusing today's medicines with nanotechnology, bio-engineering and use of computer science. He said that he wants to engage students in the project to understand the potential of research and development and appreciated the role played by institutes such as IIT-Gn in attracting the foreign faculties for collaboration.
IIT-M’s advanced drone promises to aid disaster relief

CHENNAI: An unmanned aerial vehicle (UAV) developed by IIT-Madras students promises unmatched capabilities in disaster relief and other emergency operations as the high-tech drone can be operated even during inclement weather conditions.

The out of the box idea may help in taking to next level the various operations during calamities and perhaps even terror attacks.

The team of the institution has accomplished “Operation Garuda” after a hard work of three years. The UAV with coaxial quadrotor configuration has several hours’ endurance and is capable of semi-autonomous navigation.

“Terrorists attacked Mumbai hotels and other places and that time several police personnel lost their lives. Also, during Uttarakhand flood, it took several days for the Army to reach the disaster area. These incidents prompted us to create a device that could solve such type of problems,” Ganeshram Nandakumar, a PhD scholar at Department of Engineering Design and the head of the students team, told Deccan Herald.

“This UAV has the capacity to enter through windows or enter any other sensitive area which human beings cannot enter. It also has a high-resolution camera which can take clear pictures of anything from a 2 km height. It can be customised for size, flying time and carrying payload, depending on the requirement”, he said.

Ganesh said the National Programme on Micro Air Vehicle (NPMICAV), a joint initiative of Defence Research and Development Organisation (DRDO) and Department of Science and Technology (DST), also trying to develop such an UAV, that can travel several kilometres even during severe weather conditions.

According to IIT-M professor Dr Asokan Thondiyath, who supervised the student’s invention, said the hardware technology onboard Garuda includes all synthetic vision systems which provide ground operators a clearer picture of developing scenarios and offer a greater depth of vision. He said advanced incorporation of night vision and far-infrared spectrum technologies would aid dusk operations.

The professor said that the Garuda, developed at a cost of just Rs 3 lakh, could be enhanced depend upon the requirement from either defence personnel or officials from the disaster management.

He revealed that police department and fire service departments from different states have shown interest in Garuda. “Whatever demand comes, we will develop according to their requirements after the approval of our Chairperson,” he added.

DH News Service
**DELHI RULES**

India’s two ‘most trusted educational institutes’ are from Delhi, with Hindu College being ranked first followed by IIT, Delhi. This was announced as a part of the launch of TRA’s (formerly Trust Research Advisory) recent research conducted with 7,710 respondents across 40 cities. The next two ranks were occupied by Chennai institutes – Loyola College was placed third and Anna University, fourth. Hans Raj College, Delhi, was on the fifth rung. There are six Delhi institutes among India’s top 10, making the city a leader in higher studies.

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**Disconnect in education: JNU VC**

**New Delhi:** The current system of education has suffered a disconnect from spiritual teaching, JNU VC SK Sopory said on Sunday. “There has been a disconnect in our education from spiritual teaching. Spiritual education and technological progress should go hand in hand,” he said at a seminar on the importance of value education at IIT-Delhi.
IISc Researchers Invent Micro Needle That Stings Less


BANGALORE: Researchers at Indian Institute of Science have developed a micro needle which can deliver drugs directly into the body with less pain.

Made of silicon and coated with fine layers of titanium and gold, the needle is result of a collaboration between different departments at IISc — Department of Instrumentation and Applied Physics, Centre for Nano Science and Engineering and Department of Electronic Systems Engineering.

Giving details, Prof K Rajanna, Department of Instrumentation and Applied Physics and a senior member of the research team, said the material for the needle was the most crucial element. Since the micro needle is to be inserted into the skin, the material had to be compatible with both the skin and the drug it delivers.

Scientists have studied titanium, gold and stainless steel for such biomedical applications and they are known to be safe. Silicon, while used for mass manufacturing products, was not suited for medical applications.

“Silicon is neither biocompatible nor biostable in the central nervous system. These are two very important criteria in determining the feasibility of implantable medical devices,” explained Prof Rajanna.

The researchers then took a middle path whereby they used silicon to make the needle and then gave it a covering of biocompatible titanium and gold. “When inserted, the skin is in contact only with the outer cover made of gold,” Rajanna said.

The length of the needle is equivalent to the thickness of three ordinary sheets of printing papers stacked on one another. The human skin with three different layers, approximately, has the same dimension. “The needle gets progressively thinner, and the diameter at the bottom is a little less than the thickness of one sheet of paper,” informed the researchers.
The needle was also made strong to be able to bear the resistive force of the skin. “The needle, though tiny, can withstand the weight of an object weighing more than 20 kg, which is about 10 times the resistive force offered by skin,” said Prof Rajanna.
Why we need qualified faculty in engineering disciplines

AK SARKAR & SK CHOUDHARY

The last few decades have witnessed a large growth in engineering and technical institutions in India. We have about 3,400 engineering colleges with an intake capacity of about 14.7 lakh. This excludes the existing IITs, NITs and IIITs. The government, in its first Budget, has proposed the setting up of five more IITs. This quantitative growth is welcome. However, there are areas of concern that need to be addressed if this growth has to complement quality engineering education in the country.

It is reported that many of the recently established private engineering institutions are closing down due to a wide gap between demand and supply. In Madhya Pradesh alone, in the academic session 2013-14, around 30,000 out of 96,000 seats available remained vacant. The same is the case in many other states. Does this mean that engineering education in India has reached a saturation level? If that had been the case, more than 1.86 lakh students would not have competed for about 2,000 seats in BITS Pilani this year or about 13.6 lakh students would not have applied for JEE Mains, apart from the state-level examinations for admission to technical institutions. The problem lies elsewhere. It is the poor quality of education provided in many of these new institutions that is failing to attract students. Studies have indicated that the employability of engineering graduates in the country is quite low. Since most of the students come from middle and low income groups, getting an employment immediately after finishing the degree is important.

This quality depends on high-class educational infrastructure, qualified faculty, motivated students and research-driven teaching. Most newly established engineering colleges lack on these aspects. But even those institutions like IITs and NITs which are able to attract large number of aspiring students also lack at least on two counts - sufficient numbers of qualified teachers and research-driven teaching. The matter was raised in Parliament some time ago regarding shortage of faculty in IITs. At a time when 'skill shortage' is frequently bemoaned by industry, nearly half of all teaching positions in IITs and over half in NITs are lying vacant. It is not only the newly-created IITs and NITs that face shortage, even the older IITs have over 40 per cent of their teaching positions vacant and the situation in old NITs is even worse, with 57 per cent of faculty jobs finding no takers. The Parliament question inquiring about this shortage was answered on March 13, 2013, and the ministry noted that the reason was lack of PhD candidates in engineering. It was also observed that a majority of students prefer corporate jobs over teaching. In total, about 8,200 vacancies are there, combining all IITs and NITs. If the requirements for the proposed IITs are taken into consideration, the number would be still higher, and if the vacancies in other 3,400 institutions are included, the number becomes astronomical.

The target at IITs has been to achieve a faculty-student ratio of 1:10. Since 2006, the number of students across IITs has doubled but the faculty strength has grown by just 10 per cent. The ratio now ranges between 1:19 and 1:14 in the older IITs. Inadequate number of faculty members increases teaching load and, in turn, the faculty does not have time to carry out quality research, thereby affecting research.

Can we produce sufficient number of PhDs in engineering to bridge the wide gap existing today? In fact, our aim should not only be to produce PhDs, but also good teachers. Thus, a programme needs to be developed so as to impart teaching qualities while one is working for PhD. We need high quality faculty members with a research-bent of mind. The ministry of HRD should take it up on an urgent basis, else the establishment of new institutions would not have any value as we would fail to produce quality employable engineers in the absence of adequate quality faculty in our institutions.

Sarkar is senior professor and Choudhary is associate professor, Birla Institute of Technology and Science, Pilani. Views are personal.
Debate soon on new education policy: Smriti

Hyderabad, Aug. 24: Union human resource development minister Smriti Irani said on Sunday that the government would soon initiate a “state-wise, region-wise and national” debate to formulate a new education policy required for current times.

“The last time the national education policy was formulated was in 1986. If we have to make ‘Made in India’ a grand label, then we need a course correction in our education policy. I am happy to share here that we will initiate a state-wise, region-wise, national debate and deliberation to formulate a new education policy,” she said at a symposium on “Restructuring our education system with Bharateeya perspective of values”, organised by the Keshav Memorial Educational Society as part of its platinum jubilee celebrations.

Regretting that adequate knowledge and awareness on the greatness of Indian legends in different fields is lacking in the present generation, she said there is a need to celebrate “the glory of ancient India”.

Citing a few examples, she said that the great contributions of ancient mathematician-astronomer Aryabhatta on algorithms are realised when students pursue a masters degree in mathematics.

She said that some officials lacked knowledge of Pingal Venkalah, the freedom fighter who designed the Indian tricolour, when she wanted to conduct an essay competition on him.

The minister said the youth should know about great Indians, including those still alive, as they often use the Internet to learn about international celebrities.

Recalling celebrated author Mark Twain as having said that India is the birthplace of human speech, she said her ministry conducted a “Sanskrit Saptah” recently in which 90,000 students participated.

The government plans to celebrate “Matrubhasha Divas” on February 25, 2015, across the country as India is a diverse nation, the Union minister said.

Later, she called on Andhra Pradesh chief minister N. Chandrababu Naidu and discussed several issues, including setting up of Central educational institutions in the state as well as imparting employable skills to the youth.

The Centre plans to digitise the process of conducting examinations and issuing hall tickets in universities, an AP government release quoted her as saying.

She has also assured of her co-operation to the state government, the release said. — PTI
BIZ COMPETITION

The Entrepreneurship Cell at IIT Kharagpur is inviting entries for its annual business model competition, Empresario, from across countries. For the first round, participants are required to fill a questionnaire online, briefly explaining their business idea. The deadline for submission is October 20. Empresario participants are mentored and supported by organisations like The Indus Entrepreneurs (TiE), National Entrepreneurship Network (NEN). This year, the event is being presented in association with the International Business Model Competition (IBMC). The best entries in all categories will get an opportunity to participate directly in the semi-final rounds of IBMC 2015, which is to be conducted abroad. The final rounds of Empresario 2015 are scheduled to be held during the Global Entrepreneurship Summit 2015. For more details, visit ecell-iitkgp.org
Needed, an antidote to capitation fee menace

As we wait for amicus curiae Salman Khurshid’s report on the capitation fee menace in professional colleges, some perspective is necessary

S. Vaithhyasubramaniam

The Supreme Court recently appointed senior advocate Salman Khurshid as amicus curiae and directed the Chief Secretaries of the ‘capitation quartet’ States – Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra – to provide all information to Mr. Khurshid to enable him analyse and submit a solution through which we can put an end to the capitation fee menace in professional colleges. As we wait for the report, some perspective is necessary.

The Supreme Court’s concern on various public issues like smoking in public, parental care, capitation fee and even mosquito control exemplifies its empathy for common citizens. It has protected common citizenry, not only by giving the final word on disputes involving interpretation of the Constitution and legislative enactments, but also framing schemes to ensure a proper implementation.

That is what everyone thought when the Supreme Court in the Unnikrishnan case (1993) framed a scheme to prevent commercialism of admissions to professional colleges.

A fundamental right

I distinctly remember my conversation in 1993 with a senior Supreme Court advocate, who felt that the judgment had made the pendulum move to an extreme position, snatching away the fundamental right to administer educational institutions. He said it needed to be brought to an equilibrium. True to his words, in the T.M.A.Pai Foundation case (2002), the Supreme Court scrapped the Unnikrishnan scheme, deeming it unconstitutional. The Court held that starting an educational institution was a fundamental right and that the government could not interfere in the administrative rights of private institutions – minority or non-minority.

In Islamic Academy (2003) and P.A. Inamdar (2005), the Supreme Court reinforced the rights of private institutions and condemned the practice of collecting capitation fees. The Supreme Court’s triple test formula for admissions directed private institutions to ensure fairness, transparency and non-exploitation. The

In 2013, the Supreme Court struck down the National Eligibility and Entrance Test as ultra vires. Picture shows medical students staging a protest in support of NEET at Jantar Mantar, New Delhi, in February 2013. — PHOTO: V. SUDERSHAN

The regulators have preferred to turn a Nelson’s eye, acting as a catalyst to an annual capitation ritual

same senior advocate in 2002 recalled his 1993 comment and was puzzled that the pendulum had gone to the other extreme.

In 2013 came another opportunity for the Supreme Court in the NEET (National Eligibility and Entrance Test) case.

Justice V.R. Krishna Iyer in State of Kerala vs. T.P. Roshana (1979) brought to light the goal of judiciary. He said, “The rule of law should not petrify life or be inflexibly mulish. It is tempered by experience, mellowed by principled compromise, informed by the anxiety to avoid injustice and softens the blow within the marginal limits of legality. That is the karuna of the law.”

“Nor is law unimaginative, especially in the writ jurisdiction where responsible justice is the goal. The court cannot adopt a rigid attitude of negativity and sit back after striking down the scheme of Government, leaving it to the helpless Government caught in a crisis to make-do as best as it may, or throwing the situation open to agitational chaos to find a solution by demonstrations in the streets and worse.”

He goes on to add, “The need for controlling its repercussions calls for judicial response. After all, law is not a brooding omnipresence in the sky but an operational art in society.”

The NEET case was the perfect one to test ‘responsible justice’. The Supreme Court struck down the NEET as ultra vires and held that Medical Council of India (MCI) Act, 1956 doesn’t empower MCI to conduct a unified NEET. The government ended up on the losing side, thanks to a battery of highly paid Supreme Court advocates who appeared on behalf of private medical colleges.

In NEET case, the Supreme Court correctly interpreted the judgments of Islamic Academy and TMA Pai Foundation cases, which came as a form of relief and rescue to private medical colleges. However, was ‘responsible justice’ served?

It was Justice Anil B. Dave who, in his dissenting judgement, pointed out: “I fail to understand as to how autonomy of the said institutions would be adversely affected because of the NEET. The government authorities or the professional bodies named hereinabove would not be creating any hindrance in the administrative affairs of the institutions. Implementation of the NEET would only give

better students to such institutions and from and among such highly qualified and suitable students...”

After the NEET case, I wrote an article on how the Supreme Court could have taken the pendulum to its equilibrium position and also suggested a workable formula that not only satisfies the triple test laid down by the Supreme Court but also does not affect the rights of private institutions. The appointment of Mr. Khurshid as amicus has provided a ray of hope. Its an opportunity that is too precious to be lost and, if lost, will snap the pendulum beyond anyone’s reach.

‘Highest bidder is the final buyer’

A mere reliance on the four State Governments’ data may lead to an “All izz well” feeling, implying that the Centre and States, through various legislative and statutory provisions, have been effective in dealing with the issue of capitation fees. If that is the case, why did the National Institute of Public Finance and Policy give the education sector a shameful number two position in the list of black money generators?

The highest bidder is the ultimate buyer principle has resulted in a collusion between management and parents and in an unscrupulous triumph of money over merit. The regulators have preferred to turn a Nelson’s eye, acting as a catalyst to this annual capitation ritual.

The capitation fee issue is not just about college management. It comprises a broad ecosystem having varied stakeholders — selfish parents with brutal money power; deafeningly silent regulators; and other victims and beneficiaries who have been direct or indirect consumers of professional education. It would be a good idea for amicus Khurshid to gather inputs from different parties on the ground realities and the possible remedies. The concerned stakeholders, including the students, are high with the hope that Mr. Khurshid will prescribe the killer antidote to this toxic steroid and that the Supreme Court will administer this antidote and deliver ‘responsible justice’.

(V. Vaithhyasubramaniam is Dean, Planning and Development, SASTRA University. E-mail: vaithya@sastra.edu)
A ‘smart skin’ that lets aircraft feel damage

Sensors Can Detect Winds, Heat & Stress

London: Researchers are developing a new technology that enables the exterior of aircraft to “feel” damage or injury in a way similar to human skin and could warn engineers of potential problems.

The technology, being developed by Britain’s BAE Systems, works by covering the entire body of a plane with tens of thousands of micro-sensors. These sensors, which can be as small as dust particles, can even be sprayed onto an aircraft like paint while watching her tumble dryer, which uses a sensor to prevent overheating.

“Observing how a simple sensor can be used to stop a domestic appliance overheating got me thinking about how this could be applied to my work and how we could replace bulky, expensive sensors with cheap, miniature, multi-functional ones,” she said.

“This in turn led to the idea that aircraft, or indeed cars and ships, could be covered by thousands of these motes creating a ‘smart skin’ that can sense the world around them and monitor their condition by detecting stress, heat or damage,” she added.

The sensors which might be as small as dust particles and have their own power source, could even be sprayed on to an aircraft like paint.
India ranks poorly in employee-employer relations standing at 61st position, which is far behind countries such as Mexico, Thailand and the Philippines, according to a report by Morgan Stanley.

"On the metric of cooperation in labour-employer relations India ranks at 61, behind Mexico (44), Thailand (37) and the Philippines (34)," according to the report titled 'What's Holding Back India's Labour Market Environment? Part II' by Morgan Stanley.

The most contentious issue with regard to labour regulation in India is flexibility to lay off workers if a firm employs more than 100 workers, because it needs to notify and take permission from the concerned government administration, it pointed out.

In labour market efficiency ranking among 148 countries, India is placed at 99th spot compared to China (34), Brazil (60) and Philippines (99), the Morgan Stanley report said.

Labour pains in India are endemic, the report said. "Indeed, according to the World Bank's index on hiring and firing practices, Bangladesh ranks at 23, China at 28, and Pakistan at 36 compared to India's rank of 52," it added.

In labour market efficiency ranking among 148 countries, India is placed at 99th spot compared to China (34), Brazil (60) and Philippines (99), the Morgan Stanley report said.

India needs to amend provisions which allow outsiders to be office bearers. Currently, one-third of the office bearers or five can be outsiders. "India also needs to introduce a strike ballot such that a strike can be called only if it is supported by a qualifying majority," it said.

On contract labour, it said, there is a need to allow free use of contract labour while ensuring that the rights of contract labour are protected.

Though countries such as China, Malaysia and Vietnam do not prohibit the use of contract labour for permanent tasks, other Asian countries prohibit the use of fixed-term contract labour for permanent tasks — such as Bangladesh, Indonesia, Pakistan, the Philippines and Thailand.