

Newspaper Clips

September 4, 2012

Pioneer ND 04/09/2012

P-2

IIT breakthrough promises end to curse of terror blasts

PNS ■ CHENNAI

Terrorists better watch out! Scientists of the Indian Institute of Technology-Madras has come out with a unique sensor which can alert police and security agencies about the presence of even one part per billion (ppb) parts of explosives like TNT or RDX on their person or luggage. It is innovative in many ways as the sensor could pick up signals of the explosives even from a safe distance, Prof. T Pradeep, Department of Chemistry, IIT-M, who led the team which developed the sensor, told The Pioneer.

As on date, explosives of any kind could be detected only through invasive probes, which include whole body frisking and scanning the luggage or the vehicles which are being used to transport it. Not any more. "Sensors, if installed at vantage points, would pick up even a part per billion of the explosives hidden from the public eye," said Prof. Pradeep who showed the properties of the sensor installed in his nanotechnology laboratory in IIT Madras. A German scientific journal by name *Angewandte* has published a research paper on this topic

authored by Team Pradeep.

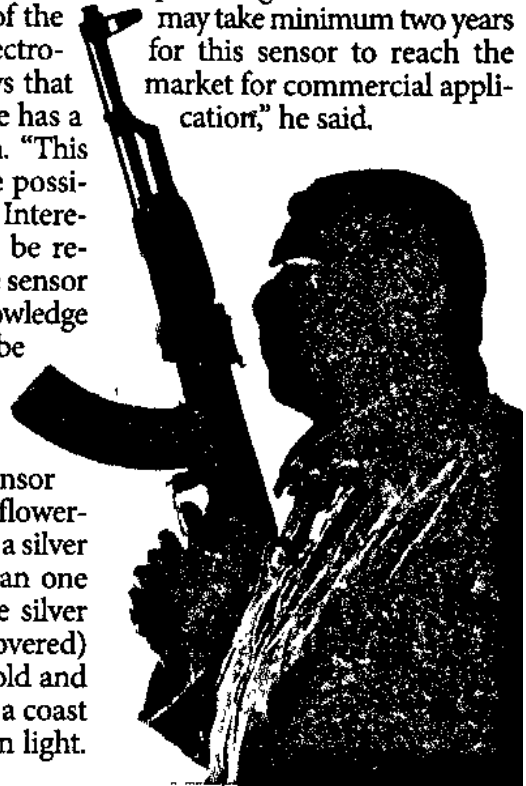
The sensor works on the possibilities offered by nanotechnology, he said, "All you require is a fluorescence microscope which will have the nanostructure-sized sensor developed by us. The luminescence of the sensor will change from red to green if it comes across even a part per billion quantity of the explosive," said Prof. Pradeep.

What adds to the power of the sensor is that it could double check the presence of the explosives by Raman Spectroscopy. Prof. Pradeep says that each and every explosive has a specific Raman Spectrum. "This will totally eliminate the possibility of any fault alarm. Interestingly, no hold up will be required for checking. The sensor will work without the knowledge of the carriers. They may be able to hoodwink the security experts but not the sensors," he said.

Pradeep said the sensor has two components; a flower-shaped gold particle and a silver particle which is less than one nanometer in size. "The silver particle is embedded (covered) in a protein. Both the gold and silver particles are given a coat of dye which emits green light.

The silver particle emits red luminescence in normal conditions. But even a small quantity of the explosives would cut off the red light. When the red light goes off, the green light gets prominence," he explained.

The sensor was developed as part of a national programme and formed the theme of a PhD thesis by one of the research scholars. He said an application has been filed for patenting the innovation. "It may take minimum two years for this sensor to reach the market for commercial application," he said.



IIT-Kanpur barred from receiving foreign donations

Indo Asian News Service
Kanpur, Sept. 3

The Union Ministry of Home Affairs has barred Indian Institute of Technology (IIT)-Kanpur from accepting foreign donations, citing the premier institute's laid-back attitude in submitting documents supporting the usage of foreign funds, an official said.

The institute has been barred under the provisions of Foreign Contribution Registration Act (FCRA), 2010, with immediate effect, informed sources said.

The prime objective of the act is to "regulate the acceptance and utilisation of foreign contribution

and foreign hospitality by persons and associations working in the important areas of national life".

While IIT-K authorities refused to react to the development "at this point", the Home Ministry has officially put the institute's name in the list of organisations whose FCRA registration has been cancelled.

In the list for 2011-12, which carries 4,139 such institutions, 72 are from Uttar Pradesh.

Ministry officials said the move to scrap the FCRA registration was "necessitated" after these top educational institutions failed to "submit satisfactory supporting

documents of the fund usage".

Besides IIT-K, FCRA registration of eight other premier institutions in the country, including Jamia Milia Islamia and Jawaharlal Nehru University (JNU), has also been scrapped.

While no official communique has been received by the institute, officials said they had been "sounded on the matter."

"We are aware about the matter... We are positive that this decision would not, in any way, hamper our growth," a faculty member said, adding that the Comptroller and Auditor General (CAG) audits the financial transactions of IIT-K.

However, a senior faculty member admitted that the decision "would certainly create a lot of problems."

"For many researches and other activities, foreign funding by our alumni is very crucial. The decision will hit us for sure," he said.

Another IIT-K professor said that last year the institute was exempted from such requirements as pressed by the Government on the ground that the CAG was a "competent authority" thus foreign funding could not be stopped.

"Why did they bail everyone earlier and why are they hounding us now," the professor asked.

IIT-K, one of the foremost institutes in the country for higher education, receives generous grants from its alumni and overseas organisations for research and other activities.

According to Home Ministry officials, IIT-K (FCRA registration No.R-136530050) received foreign funding amounting to about Rs 6 crore in the previous financial year.

In 2010-11, the institute's planning and resource generation department received a donation of Rs 4.08 crore from 772 donors, of which 501 were domestic donors while 271 were from foreign countries, official said.

Hindustan Lucknow 03-09-2012 P-8

आईआईटी कानपुर पर विदेश से धन लेने पर रोक

कानपुर | वरिष्ठ संवाददाता

आईआईटी, कानपुर का नाम उत्तर प्रदेश की उन 72 संस्थाओं में शामिल है जिस पर विदेश से धन लेने पर रोक लगा दी गई है। केन्द्रीय गृह मंत्रालय के अधीन आने वाली संस्था फॉरेन कन्ट्रीब्यूशन रजिस्ट्रेशन एक्ट (एफसीआरए) की लिस्ट में इसका नाम शामिल कर दिया गया है। आईआईटी, कानपुर ने फिलहाल इस पर टिप्पणी करने से इनकार कर दिया है। कहा है कि उसने किसी तरह के नियमों का उल्लंघन नहीं किया है।

एफसीआरए ने विदेश से धन लेने पर वर्ष 2011-12 के लिए जिन संगठनों और संस्थानों की लिस्ट जारी की है उसमें 4,139 में से 72 उत्तर प्रदेश की हैं। इसमें आईआईटी, कानपुर का नाम भी शामिल है। लिस्ट में आईआईटी, कानपुर का रजिस्ट्रेशन नंबर आर-

136530050 बताया गया है। सूची में इसका क्रम 33 वें स्थान पर है। 17 जुलाई 2012 को संस्थान पर विदेश से धनराशि लेने पर रोक लगाई गई थी।

आईआईटी, कानपुर ने विगत वर्ष एफसीआरए की लिस्ट के मुताबिक छह करोड़ से अधिक विदेश से धनराशि ली थी। एफसीआरए की अधिकृत सूचना के मुताबिक प्रदेश के 59 संस्थानों ने एक करोड़ से अधिक की धनराशि विदेश से ली थी। आईआईटी, कानपुर का नाम क्रम संख्या 55 पर है। संस्थान ने कुल 6,04,97,715 रुपए विदेश से लिए।

आईआईटी, कानपुर को एफसीआरए ने अभी तक कोई नोटिस नहीं दी है। एक वरिष्ठ अधिकारी ने बताया कि आईआईटी कानपुर का ऑडिट महालेखा नियंत्रक एवं परीक्षक (केग) से होता है। इस पर कोई खास प्रभाव नहीं पड़ेगा।

Stalled in House

Education Bills need early approval

ONE of the showcase ministries of the UPA government, the Human Resource Development, run by Kapil Sibal — who takes pride in being in a hurry — has had only a mixed bag of success, with many flagship initiatives receiving flak and others stuck in the “system”, Parliament to be more precise. Some of the prominent Bills that are either stalled in the House or the minister has not been able to present these to Parliament owing to the current stalemate include one on tribunals for academic disputes and another on setting up a regulator for higher education, above the UGC and the AICTE. An electronic repository of academic awards for quick verification and autonomy for the CBSE, are also awaited. All of these are urgently required to address the burgeoning higher education set-up, which in size is third in the world.

As for its worth, a study (Universitas 21) that took output, resources, policy environment and collaborations into account has ranked India 48th out of 48 countries it assessed. The reasons are all around to see. There are thousands of vacancies in technical institutes going abegging. A degree from most of these places does not lead to a job commensurate with the qualification. Some of the best humanities colleges have syllabi and courses that today have few takers as they have lost relevance for the industry. Other than the premier institutes, very few have faculties that may inspire confidence. On the other hand, there are brilliant students in rural areas who don't have access to colleges for reasons of distance or money.

India is a country that takes pride in its human resource — both size and quality. The latter, however, meets global standards only when students go abroad for higher education, as we have very few world-class institutes. The country lags way behind in pure sciences and industrial research and development — essentially, high-worth knowledge. Unless the political leadership understands the importance of higher education, it would be hard to keep up in today's knowledge-driven world. Meanwhile, we continue to lose our top students to foreign universities and industry.

Higher education costs ₹95k-cr forex outflows: Assocham

FBD BUREAU
NEW DELHI, SEPT 3

OVER six lakh Indian students going abroad for higher education cost the country foreign exchange (forex) equivalent of Rs. 95,000 crore annually, according to a study by industry body, The Associated Chamber of Commerce and Industry of India (Assocham). The study said that most of them go abroad as they do not find seats in quality institutions within the country. Thus, India has a huge capacity constraint when it comes to quality higher

education. The answer lies in establishment of high standard quality institutions; Assocham said and suggested a public-private partnership (PPP) model.

"Higher education in India is subsidised in the Government sector. An IIT student pays an average \$150 monthly fee, while students opting for education in Australia, Canada, Singapore, the US and UK shell out \$1,500-4,000 as fees every month", said Assocham, secretary general, D S Rawat.

The paper suggests that the good quality foreign universities should be encouraged to



India, especially in tier-II cities like Ahmedabad, Amritsar, Shillong etc. Opening of the higher education will result in providing 30-40 million additional jobs in the field of education alone. India has only 45,000 foreign students, as compared to 2-3 lakh in Australia.

With increasing competition and cut-offs in some universi-

ties going as high as 100 per cent, lakhs of students are left with not much alternative but to search for learning abroad. As a consequence, demand for education loan has also been increasing by over 20 pc annually.

A majority of Indian students in the UK are sourced from North India, though the numbers from South India and parts of Western India (Gujarat) are growing. However, very few students go from the East and North-East regions of India.

Though the UK, Germany and France attract foreign stu-

dents in large numbers, each of these countries has unique motivations surrounding the presence of foreign students in their countries. The Indian students are gradually exploring UK, Germany, France, Sweden, Italy, Ireland and Denmark in Europe and also take up part-time jobs. The number of international students in the UK increased from 368,968 in 2009 to 425,000 in 2012.

The paper further reveal that a majority of Indian students in the UK are sourced from North India, though the numbers from South India and parts of Western India (Gujarat) are

growing. However, very few students go from the East and North-East regions of India. Though the UK, Germany and France attract foreign students in large numbers, each of these countries has unique motivations surrounding the presence of foreign students in their countries.

The tuition fee in USA varies from \$6000 to \$25,000 per year. The cost of tuition fee for national students is about \$9000 and \$20,000 for international students. The cost to pursue a higher education in Canada is low as compared to other foreign countries such as UK, USA and Australia.

The Hindu ND 04/09/2012 P-12

"Satyen Bose should have got the Nobel"

Ananya Dutta

KOLKATA: Rolf Heuer, director general of the European Organisation for Nuclear Research (CERN) said here on Monday that he believed that Satyendra Nath Bose, the physicist in honour of whom a family of particles in the Standard Model of particle physics is named, should have been given the Nobel Prize.

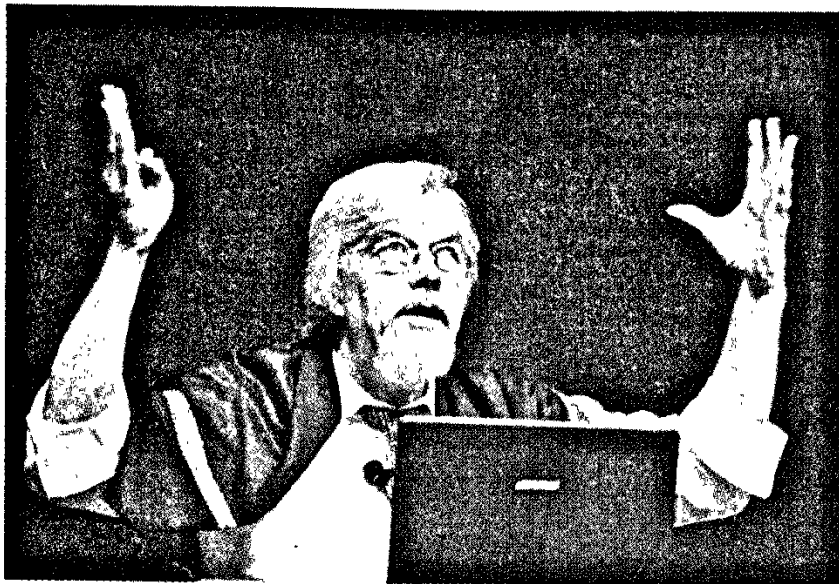
"He has certainly contributed to our understanding of particle physics on the level of other Nobel Prize winners," Dr. Heuer told journalists on the sidelines of a public lecture on the Large Hadron Collider (LHC) experiment.

Dr. Heuer said there were many people who had made significant contributions to science, but had not received the award and Satyendra Nath Bose was one of them.

"We have just two families of particles - the fermions and the bosons. And we call them bosons because Satyendranath Bose has done a lot of work... His contribution is so huge. We do not give names to particles or families of particles if somebody has not done fantastic work," he said.

Bikash Sinha, Homi Bhabha Professor at the Department of Atomic Energy, who was also present on the occasion pointed out that the Nobel Prize for Physics is awarded every year, "but as long as human civilisation exists there will be bosons."

In the course of his lecture,



CERN Director-General Rolf Heuer speaking about the Large Hadron Collider experiment at a public lecture organised in Kolkata on Monday. - PHOTO:

SUSHANTA PATRONOBISH

Dr. Heuer said the announcement of the discovery of the "Higgs boson-like particle" in July this year was only the beginning of the work to be done on the particle.

"We have to measure the properties of the particle with high precision. We have to find out whether it is a scalar particle. Is it the Higgs boson or is it one of several - we can have a whole family of Higgs bosons," he said.

He also said that studying the properties of this particle could provide scientists with

insight into dark matter and dark energy.

"I think our understanding about the universe is about to change," he said, pointing out that the Standard Model of particle physics explains the existence of merely five per cent of the universe.

The experiments at the LHC will not only provide evidence for the Standard Model, but also expand our knowledge about other phenomena including anti-matter, dark matter and dark energy, he said.

India's application for associate membership

CERN authorities were eagerly awaiting a written application from India applying for associate membership of the CERN Council, Dr. Heuer said.

Bikash Sinha, the Homi Bhabha Professor at the Department of Atomic Energy told journalists that the application process was awaiting a clearance from the Ministry of Finance and an announcement in this regard can be ex-

pected later this month.

Asked if India had approached the authorities at CERN for associate membership of the CERN Council, Dr. Heuer said: "Verbally yes. We have had discussions with the Atomic Energy Commission."

He said he had been told that the file had been cleared by the Commission. The former Indian President, Pratibha Patil, visited CERN in October 2011 was very positive about the application, he said.

"It is a question of some formalities in the government and then I hope to receive a written application and then I shall be very happy," he said.

At present, India has an observer status at the CERN council.

Elaborating on the benefits of India becoming an associate member of the CERN council, he said scientists from across the country will be able to apply for staff positions at CERN, which is only possible for members or associate members.

He said they would have an opportunity to be educated and trained, in addition to acquiring other skills in an international environment. "I believe a large country, like India, needs a lot of international connections," he added.

He also pointed out that once India is an associate member, Indian companies can bid for tenders for the various projects at CERN.

IIT Kanpur to study Delhi's air quality

Neha Lalchandani | TNN

New Delhi: Delhi government's environment department is set to commission IIT Kanpur to study its problem of air pollution. The government has already devised a master plan to deal with the issue and its implementation should start by next year.

"The master plan is quite comprehensive but we still felt the need for a technically qualified agency to study Delhi's pollution levels and its causes. The study will help us to improve our master plan by suggesting means of reducing levels of critical pollutants," said a senior official.

During monsoon, the city was enjoying a significantly clear air but as the season is about to end, experts are worried about the levels of particulate matter shooting up.

"Even after such incessant rain and its wash-out effect, PM2.5 levels have just about touched the Indian standards of 60 microgram per cubic metre and could not come down to 25 microgram per cubic metre, as prescribed by WHO guidelines. This shows that even after the rain doused the natural and road dust, the par-

ticles from combustion and exhaust sources remain prominent and close to the standards in Delhi. The problem of high particulate levels cannot be dismissed as a problem of mere road dust," said Anumita Roychowdhury, associate director, Centre for Science and Environment.

Small particles (particulate matter) less than 2.5 micrometers in diameter are called PM2.5.

During monsoon, the city was enjoying a significantly clear air but as the season is about to end, experts are worried about the levels of particulate matter shooting up

Environment department officials say that after a couple of years of real time air pollution monitoring, they found that particulate matter was not the worst villain. "PM of course remains a worry and we are just about managing to control its level but more critical for us are levels of carbon monoxide, oxides of nitrogen, benzene, toluene etc. There is an urgent need for at least 10 more moni-

toring stations to get more comprehensive air quality data for the city," said an official.

Under the master plan, measures will be taken to not only to improve monitoring of polluting vehicles in the city but also focus on interstate vehicles. Under the proposal, vehicle insurance will depend on the vehicle clearing its annual fitness test. All four wheelers will be required to undergo this compulsory test.

Officials said that the present pollution checking mechanisms would also need to be strengthened. Standards will be revised for pollution under control checks, especially for post-2000 registered vehicles. An on-board diagnostic system will also be introduced so that vehicles may be tested on the spot if their emissions appear to be high.

A specific strategy for two-wheelers is also being designed as state pollution data claims that 54% of the total pollution levels in Delhi are due to two-wheelers. "We are looking at the end of next year for some of these plans to be implemented. Meanwhile there have to be short term measures to deal with the immediate problem," said sources.

IIMs may get legislative cover, award degrees

Akshaya Mukul | TNN

New Delhi: Five years after it first initiated a legislation to bring 13 premier Indian Institutes of Management (IIMs) under the purview of Parliament, the HRD ministry has revived the process and is working on a bill modeled on the lines of the Institutes of Technology Act, 1961, under which IITs function.

In 2007, the provocation for proposing a legislation for IIMs was the institutes' recalcitrance in implementing the OBC reservation. However, this time round, the idea has come from within. Many IIM directors and board members have been telling the ministry that without a legislative cover, IIMs are not able to award degrees. "It has become a hand-

icap. Many IIMs have started five-year integrated courses but are not eligible to award degrees. Once the proposed Institutes of Management Bill is passed, IIMs would become more attractive for students," a source said.

Now, IIMs function as autonomous societies and run as per their Memorandum of Association (MoA) that is different in case of each institute. IIMs award only diploma for a two-year management course. Degrees can be awarded only by institutions set up by an act of Parliament, state assembly, deemed universities and institutes of national importance. Director of one of the new IIMs told TOI, "At a time when serious changes are being contemplated in the Common Aptitude Test-like making it an interna-

tional test, IIMs need to have authority to grant degrees. Recently, the ministry discussed the matter with us. Once bill is prepared by the ministry we would be consulted."

But some feel parliamentary control could also compromise IIMs' autonomy and "out-of-box decisions". First, there would be change in the administrative and financial powers of the institutes. "Over the last three years, government had set up many committees to look into the functioning of IIMs as well as chalk out a roadmap. Most of the old IIMs have already amended their Memorandum of Association that gives them more power and flexibility. "We do not know what would happen to flexibility and financial autonomy," one IIM director said.

Government blames India's poor educational score on cultural disconnect

It's dodging the real problem

Test doesn't assess students properly

Indian students ranked second last among 73 countries that participated in the 2009 Programme for International Student Assessment (PISA), which assesses education systems across the world. The poor results in mathematics, science and reading among school-leaving students of Himachal Pradesh and Tamil Nadu, two of India's better performing states on development and education indices, should have jolted the government out of its complacency. Instead, it has chosen to blame the dismal global ranking on the questions posed to the students.

We are being told, therefore, that the results are not a reflection of India's poor state of schooling. Instead the failure has been attributed to a cultural disconnect between the questions and Indian students. The government is even considering writing to the Organisation for Economic Cooperation and Development (OECD) to factor in India's "socio-cultural milieu" in the test questions. This is an absurd plea. First of all, science and maths have little to do with cultural values, but Indian students performed equally poorly in these. Secondly,

if it's the case that the OECD-designed test reflected a western cultural bias, how is it that Chinese students topped the exam?

In real life, India's dismal PISA results are also confirmed by domestic educational

■TIMES VIEW■

surveys, such as those carried out by the NGO Pratham. We should stop acting as laws unto ourselves, and realise that we live in a world of international competition. Being in denial mode will only breed more mediocrity. Indians are hungry for competition, it's just that the educational system isn't up to scratch. If the government wants to offer opportunities for India's youth and transform the country into a knowledge society, it cannot afford an ostrich-like attitude of burying its head in the sand. Instead, it needs to think seriously about how to trigger an educational revolution.



We Indians have always fetishised tests. They are seen as the be-all and end-all of academic and intellectual achievement. Doing well is enough to catapult a child to local star-

■COUNTERVIEW■

Anil Thakkar

dom, and an average or, heaven forbid, poor performance is occasion for endless bouts of hand-wringing and self-flagellation. So it's hardly surprising that this tendency has metastasised into a national characteristic now on full display after India's poor PISA performance. But what all those slamming India's educational system forget is, firstly, the context of these tests, and secondly, that performance in tests is very often a poor metric by which to judge a student's true ability.

It would be easy to dismiss the government's point as an attempt at making

excuses, but it would also be a mistake. The very fact that PISA is touted as an internationally standardised assessment shows the problems inherent in it. Given that over 70 nations participated in it – and all the diverse educational systems, teaching methodologies, languages, syllabi, even focuses on what is important for a student to learn and what is irrelevant – the conceit that a standardised test can produce any sort of objective picture of student abilities is laughable.

Education, after all, doesn't take place in a hermetically sealed academic bubble. It grows out of and is impacted by the socio-cultural environment. How, then, is a kid from Himachal Pradesh or Tamil Nadu – the two states from which students participate in PISA – perhaps from a rural background, supposed to answer questions of reasoning or reading comprehension involving ATMs and air bags inflating in cars? How is a test so alien supposed to measure their true capabilities? Better to work on our education system and ignore these tests entirely.

Blend Is The New 'B' in B-Schools



ARUN PEREIRA

For centuries, educators followed the basic premise that teaching was simply a glorified version of 'telling' and called it lecturing. The assumption was that by listening to the lecturer, learning would take place. Among the first to challenge this model in professional education was the Harvard Business School, which introduced business cases in the classroom, and learning took place by encouraging debate and interaction. Instructors saw firsthand the power of active learning, as opposed to passive learning. Today, the best b-schools are enhancing active learning methods with other initiatives, all of which call for a "blended" approach, leading to learning that is likely to be deeper, and longer lasting.

BLENDED DELIVERY

Even as instructors in b-schools understand the value of active learning, they also recognise the need for limited doses of straight lecturing. Today, these "limited lectures" can be offered to students outside the classroom, using widely available technologies, freeing up valuable time for active learning inside the classroom. Thus, webcasts, video-sharing sites, and powerful learning management systems allow for the recording and replaying of short lectures, so that students can listen at their own pace—allowing for pausing and rewinding, which were not possible in the context of a classroom lecture.

BLENDED CURRICULA

Today, succeeding in business, or being an effective business leader requires knowledge and expertise that go beyond an under-

standing of the traditional functional areas of business. Successful business leaders need to have a sophisticated understanding of non-business subjects such as political systems, the environment, diversity, alternate energy, poverty, discrimination, and global cultures. As such, today's b-schools are offering curricula that are a blend of both traditional business and non-business topics, underscoring the new realities of business success.

BLENDED COURSES

Managers don't face problems that come neatly packaged as a 'finance' problem or a 'marketing' problem; most problems and decisions are complex and touch various functional areas. Given this reality, b-school courses that are taught in a silo-like fashion, reflecting specific functional areas do not help students become effective decision-makers. The best b-schools today are increasingly designing courses that attempt to integrate or 'blend' various functional areas.

Thus, courses such as 'Innovation and Value Creation' do not belong to specific functions, but reflect the reality of the needs of today's corporations. However, for such courses to deliver on their promise, instructors must be able to straddle multiple functional areas and appreciate the importance of an integrated view. Many b-schools are also encouraging courses that are co-taught by multiple instructors whose expertise complement one another, and provide valuable learning for the student.

The best b-schools are continuously innovating to help provide deep and lasting learning for their students. In this quest, it is not 'business' as usual in many schools as they attempt to provide a 'blended' educational experience through delivery, curricula, and courses.

(The author is faculty and executive director of the Centre for Teaching, Learning, and Case Development at ISB-Hyderabad)

Wrong to send back foreign students, say British MPs

Hasan Suroor

LONDON: British MPs on Monday told the government that it was wrong for it to order foreign students affected by the crisis at the London Metropolitan University (LMU) to “pack their bags” and leave.

In angry exchanges in the House of Commons as Parliament resumed after the summer recess, they said the government had a “duty of care” towards students who faced an uncertain future following its decision to revoke the university’s licence to teach non-European overseas students.

Joining growing calls from Vice-Chancellors, student groups and businesses for a “rethink,” MPs accused Ministers of wrongly penalising hundreds of genuine students who have been told that they must either find places in other universities over the next few weeks or return home. They warned that the decision would damage Britain’s reputation abroad.

Senior Labour MP Jeremy Corbyn asked the government to allow students, already studying at LMU, to complete their studies. The decision to apply the ban on all students, he said, had created an “appalling” situation.

Shadow Immigration Minister Chris Bryant questioned the validity of telling students to “pack their bags.”

Immigration Minister Damian Green, however, remained unmoved and said the government was determined to “enforce the rules.” He said the university had “significant systemic problems.”

Many students had been found to have no legal right to stay in Britain, while some lacked adequate knowledge of English. The university failed to monitor the attendance of its overseas students as required under the terms of its licence.

Mr. Green assured that advice and support would be provided to displaced students.

Up to 500 foreign students could be deported after the UK Border Agency reportedly determined that they had no legal right to stay in Britain because of problems with their visas.

Nearly 2,700 students, including 300 from India, find themselves in a limbo after the government banned LMU from sponsoring and teaching non-European students for failing to ensure that they were genuine scholars and not potential immigrants in the guise of students.