Newspaper Clips
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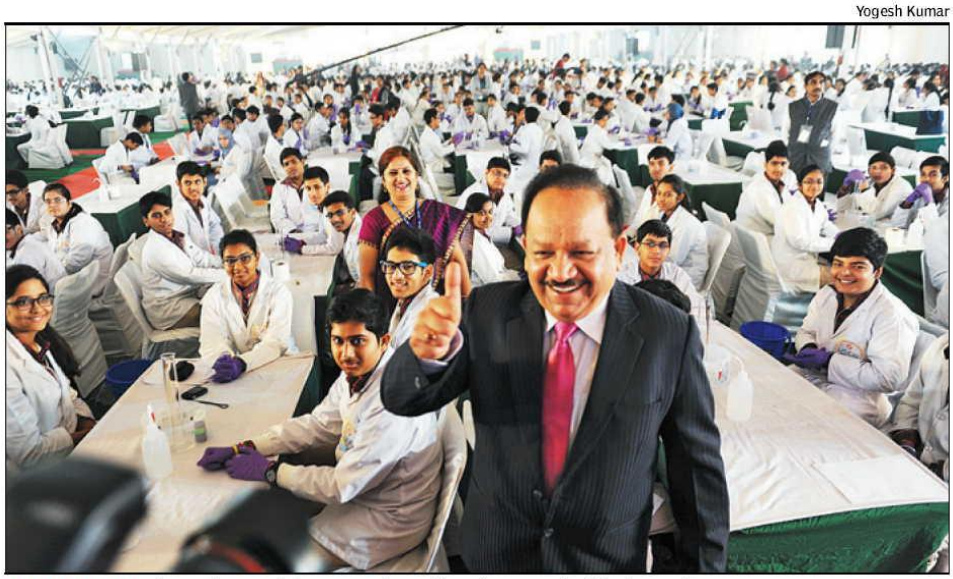
Times Of India ND 08/12/2015 P-02

Kids gun for Guinness glory with mega science experiment

TIMES NEWS NETWORK

Yogesh Kumar



THUMBS UP: Union science minister Harsh Vardhan interacted with the students

New Delhi: Attempting a Herculean feat at the Indian Institute of Technology, 2,000 children from 40 NCR schools on Monday managed to turn methylene blue "reddish-brown" and rapidly decompose hydrogen peroxide to produce foamy ropes — the elephant's toothpaste reaction.

The science experiments, which was a part of the India International Science Festival 2015, was organised by Vijnana Bharati and inaugurated by science and technology minister Harsh Vardhan and HRD minister Smriti Irani. Even if 1,400 kids are judged to have succeeded, the Guinness World Record for the largest practical science lesson would be in their bag. Northern Ireland is the current record-holder with 1,339 children.

In white lab coats, the students streamed into a tent pitched near the administrative block at IIT-Delhi. They collected numbered wristbands, displayed them for the camera while entering and took their seats at tables piled with graduated cylinders, tissue paper, gloves, droppers and other equipment. "I certainly think we have it. But our report will be sent by this evening and we'll hear from Guinness in a couple of days," said Jay Kumar, secretary general, Vibha.

"The kids are delighted," exclaimed Girija Sankaran, a teacher at Modern Era Convent, Janakpuri. "There's been a steady erosion of interest in pure science and this event surely creates enthusiasm for it," she added.

The decolourisation reaction is part of the school curriculum. "It takes just a few minutes to decolourise methylene blue using hydrogen peroxide with ferrous sulphate as catalyst," explained Yukta Malhotra, tenth-grader at GD Salwan Public School. The elephant's toothpaste reaction is essentially "rapid decomposition of hydrogen peroxide".

Irani has plans of organising an even bigger 'lesson' in Delhi, one that'll involve kids from across the country. "We can have it in conjunction with the same team that organised this programme and have over 20,000 students participating in it. I hope that today's programme has a catalytic effect on how we engage with the sciences and higher education," she said.

"Fenton's reaction (methylene blue) is exothermic as heat is generated," said Astha Sharma, a Class X student of Salwan Public School, Tronika City. It's not part of her course yet. Also, this was her maiden visit to IIT-Delhi. Most members of her group — Sunny Agarwal, Abhishek Joshi, Harshit Tripathi and Nikita Choudhary — hope to write the entrance exams and get into an IIT.

Even if 1,400 students are judged to have succeeded, the Guinness World Record for the largest practical science lesson would be in their bag

Even the clean-up was part of the deal. Mahima Kataria from Amity International School, Saket, said they wiped everything down and placed all instruments and gloves in a dish. "The experiment itself took only a few minutes," she said.

Putting the programme together was "very tedious" for K Girish Kumar, professor of analytical chemistry, Cochin University of Science and Technology. With a tent as venue, he had to pick experiments that used a minimum of chemicals, were non-hazardous and had no negative impact on the environment.

"The gas produced at the end of the elephant's toothpaste is oxygen. This was important for so many experiments in a closed space. I optimised the reaction conditions in my laboratory in Cochin. For Fenton's reaction ferrous sulphate solution is typically used, but here it was solid," Kumar said.

Millennium Post ND 08/12/2015 P-04

There is more at stake than a Guinness record: Experts

PIYUSH OHRIE

NEW DELHI: As 2,000 students participated and successfully performed practical experiments simultaneously, experts felt there was more to gain than just an entry in the Guinness book of world records.

India created history by successfully organising the single largest science lesson held at IIT Delhi, the programme which was held under the India International Science Festival being celebrated from December 4 to December 8, coordinated by Department of Science and Technology, Government of India. The programme can be considered as one of the stepping stones in overcoming the country's challenge towards developing interest in sciences and research at grassroot levels than just setting a record.

"By conducting this open experiment we plan to beat the previous record set by Royal Society of Chemistry, London, which was held at Northern Ireland and consisted of 1,339 students," said Professor K N Rao, dean Infrastructure, IIT Delhi. With regards to the experiments, Prof Rao added: "The experiments were held on the theme of catalysis."

Delhi bids for world record for 'largest practical science lesson'

Around 2,000 science students at school level from classes 9 to 12 were selected from 40 schools of the National Capital Region (NCR) by an NGO to conduct the experiment. Speaking on the open experiment, Professor Girish Kumar said: "Even though this would be viewed by many as an attempt to create a record, however, this programme is also very important in creating interest in research and sciences among students."

Based on reports there are around 2,00,000 full time researchers in India with four researcher per ten thousand labour force which is far less than China at 18 researchers per ten thousand labour force, Brazil at 7 researchers per 10,000 labour force and Kenya with 6 researchers per 10,000 labour force.

"The problem is that many today are paying more emphasis to the remuneration part of the job and looking for quick ways to succeed and thereby moving from scientific researches which require patience and intense passion and this is leading to shortage of talent," said Dr Vijai Kumar Srivastava of Indian Council of Medical Reasearch (ICMR).

AFTER IISF SUCCESS, MINISTERS MOOT FOR LARGER SCIENCE FESTIVALS

NEW DELHI: Impressed by the success of India International Science Festival (IISF), where 2,000 students from Delhi conducted "largest practical science lesson", Union Human Resource Development Minister Smriti Irani mooted for organising similar festivals in all the states. "Hopefully, 6-7 months down the line, we would be able to make even a bigger attempt at the world record by assembling 20,000 students at the Jawaharlal Nehru Stadium in Delhi," Irani said. While congratulating students for the "mega event", Union Science and Technology Minister Harsh Vardhan said: "I am excited like you. I am sure you will succeed and make the country proud." OUR CORRESPONDENT

Hindu ND 8.12.2015 P-02

IIT attempts world's largest practical science lesson

KRITIKA SHARMA SEBASTIAN

NEW DELHI: Aiming to script a new Guinness World Record in conducting the "largest practical science lesson", around two thousand school students from Delhi and National Capital Region (NCR) came together at the Indian Institute of Technology Delhi (IIT-D) on Monday.

The existing world record is held by a group of 1,339 Irish school students.

Dressed in white lab-coats, students streamed into a giant tent that was pitched by the administrative block of IIT-Delhi. The students took a shot at creating the world record of highest number of students conducting an experiment at the same venue.

The event was organised by Vijnana Bharati (VIBHA), the country's largest science movement, as part of the India International Science Festival (IISF) 2015, which concluded on Monday ahead of its schedule. The participating students were addressed by Science and Technology and Earth Sciences Minister Harsh Vardhan and Union Human Resources Minister Smriti Irani ahead of the lesson.

"Two thousand bright young students are going to participate in the record-breaking science experiment and it has already set a lot of tongue wagging," Ms. Irani said.

Expressing happiness over the IISF event, Ms. Irani said that efforts need to be made to hold similar festivals in all the States. "Hopefully, 6-7 months down the line, we would be able to make an even bigger attempt at the world record by assembling 20,000 students at the Jawaharlal Nehru Stadium in Delhi," she said, exuding confidence.


Union Minister Harsh Vardhan at the event.
— PHOTO: SPECIAL ARRANGEMENT

Pioneer ND 08/12/2015 P-04

2,000 students attend world's largest science lesson at IIT

New Delhi: Attempting to make it to the Guinness Book of World Record, 2,000 students of both Government and private schools from the national Capital assembled at the Indian Institute of Technology to conduct 'world's largest practical science lesson' on Monday.

Students lined inside a giant tent pitched by the administrative block in IIT-Delhi to take a shot at the world record for the highest number of students to conduct an experiment simultaneously at the same venue. Their aim was to break the Northern Ireland's record of 1,339 students in the Guinness Book of World Record.

The participating students, with excitement writ large on their faces, got a pep talk from Union Science and Technology and Earth Sciences Minister Harsh Vardhan and Union HRD Minister Smriti Irani ahead of the lesson.

Irani said that there are plans to have an even bigger 'practical lesson' in Delhi in the coming months, in which school students from across the country will participate. "We can have it in conjunction with the same team that did this programme today and have over 20,000 students participating. I am hoping that today's programme has a catalytic effect on how we engage with the sciences and school and higher education," she said. *SR*

Indian Express ND
08/12/2015 P-05

Kalam an inspiration for many at IIT science fest

SAKSHI DAYAL
NEW DELHI, DECEMBER 7

DR APJ ABDUL Kalam is the inspiration behind many of the projects nominated for the Innovation in Science Pursuit for Inspired Research (INSPIRE) awards, which are being showcased at the ongoing India International Science Festival (IISF). The fest, which began Friday, is being held at IIT-Delhi till December 8.

Pramodh K R, a Class X student from Kolar, Karnataka, draws the attention of people who stop at his booth to the image of the late president on his wall, before he plunges into an explanation of his model.

Called 'Vision 2020 Bangarpet', it is a model of a scientifically developed nation and advocates the use of alternate resources such as solar energy and wind power to solve problems of water scarcity, pollution, electricity, and traffic. Based on Kalam's India 2020, the project hopes to make his dream a reality.

A few stalls down, Kalam's picture appears once again, this time at A Ganesh's booth. The Class X student says the "great scientist" was the inspiration behind his saltwater battery. A resident of Andaman and Nicobar, Ganesh belongs to a fishermen community in Diglipur zone, where the problem of electricity is very common.

(The reporter is an intern at The Indian Express)

Dainik Jagran ND 08/12/2015 P-07

डायरिया से बचाएगा अल्ट्रा हेल्थ वाटर फन स्टेशन

- मुंबई के इंस्टीट्यूट ऑफ केमिकल टेक्नोलॉजी ने बनाया बिना बिजली के चलने वाला वाटर प्यूरीफायर

अल्ट्रा हेल्थ-वाटर फन स्टेशन दिखाते संस्थान के वैज्ञानिक। जागरण

अरविंद कुमार द्विवेदी, दक्षिणी दिल्ली

दुनिया भर में हर साल करीब 17 लाख बच्चों की मौत डायरिया व प्रदूषित पानी से संबंधित बीमारियों से होती है। बच्चों की मौत के लिए जिम्मेदार डायरिया दूसरी सबसे बड़ी बीमारी है। डायरिया का सबसे बड़ा कारण बच्चों को शुद्ध पानी न मिल पाना है। इस समस्या का समाधान मुंबई स्थित इंस्टीट्यूट ऑफ केमिकल टेक्नोलॉजी (आइसीटी) ने निकाला है। आइसीटी ने ऐसा वाटर प्यूरीफायर बनाया है जो प्रति घंटे 100 लीटर पानी साफ कर सकता है, वह भी बिना बिजली के और नाम मात्र खर्च पर। हैंडपंप की तरह बच्चे पानी निकाल सकते हैं। आइआइटी में चल रहे विज्ञान, प्रौद्योगिकी एवं औद्योगिक एक्सपो-2015 में इसे प्रदर्शित किया गया है। आइसीटी के केमिकल इंजीनियरिंग के विभागाध्यक्ष प्रोफेसर बीएन थोराट व शोध छात्र वैभव टिडके ने यह 'अल्ट्रा हेल्थ- वाटर फन स्टेशन' बनाया है। राजीव गांधी कमीशन फॉर साइंस एंड टेक्नोलॉजी (आरजीसीएसटी) द्वारा विज्ञान एवं प्रौद्योगिकी संसाधन केंद्र (एसटीआरसी) के तहत इसे महाराष्ट्र के गढ़चिरौली में प्रायोगिक तौर पर कुछ स्कूलों में लगाया गया है। प्रोफेसर थोराट के अनुसार, ग्रामीण क्षेत्रों में स्थित करीब सात लाख स्कूलों में पानी की गुणवत्ता बहुत खराब है। इन स्कूलों में पढ़ने वाले करोड़ों बच्चों को प्रदूषित पानी पीना पड़ता है, जो डायरिया व पेट संबंधी अन्य बीमारियों का कारण बनता है।

ऐसे काम करती है मशीन

मशीन में बड़ा कंटेनर है, जिसमें पानी भरता है। पानी निकालने के लिए हैंडपंप की तरह हत्था (हैंडल) लगा होता है। दो बार पंप करने पर एक गिलास पानी निकलता है। पानी नैनो पार्टिकल्स से तैयार सिल्वर सिरैमिक कैंडल से गुजरता है। यह नैनो सिल्वर टेक्नोलॉजी से बनाया गया है और सूक्ष्म फिल्टर का काम करता है। यह पानी में मौजूद माइक्रोऑर्गेनिज्म को नष्ट करता है। 17 हजार लीटर पानी साफ करने के बाद कैंडल को बदलना पड़ता है। इससे साफ पानी अंतरराष्ट्रीय मानकों पर खरा उतरा है।

Business Standard ND 08/12/2015
P-11

A risky move

Regulator for private coaching doesn't address the real problem

The private coaching industry, worth an estimated ₹2.4 lakh crore, has come under fire from a high-powered committee set up by the Union human resource development ministry. The committee, headed by Ashok Misra, a former director of IIT-Bombay, has suggested an All India Council for Coaching for Entrance Examinations (AICCEE) to regulate fees charged by coaching institutes and ensure a minimum standard. The panel has justified its decision by saying the purpose of education was "mental refinement" and not passing an entrance exam, and that students are becoming too dependent on coaching. The diagnosis is correct, but the prescription of setting up a regulator is not appropriate. At a time when India has been trying to move towards a more liberalised education sector, the presence of a large number of statutory bodies in higher education, without enjoying autonomy of functioning, has resulted in a highly bureaucratic system with multiple controls and regulations. And the regulators have not exactly covered themselves with glory. In fact, over-regulation by the government and a multiplicity of agencies have led to higher education stagnating, and corruption becoming institutionalised.

Certainly, there are problems in private coaching. Some provide sub-standard tuition at exorbitant prices; others falsely promise success in entrance examinations in glitzy advertisements. And this is not the first attempt to rein in coaching institutes. Over the past decade, the IIT Council has spent considerable time and money on reforming its admission system. Much of these efforts was aimed at denting the rapidly growing coaching industry feeding colleges with students high on rote learning but poor in the basics. However, the effect has been marginal. For example, the last time the IIT Council decided to give some importance to a candidate's performance in the "Plus Two" board examinations held at the end of 12 years of studying in school, the coaching institutes tied up with schools to offer a two-in-one coaching module for IIT aspirants. Meanwhile, parents are desperate. A study conducted by industry chamber Assocham reveals that 70 per cent of parents, from the top to the bottom of the social hierarchy, would spend a hefty sum on private coaching. But this happens because of constraints on supply, which has made it a recession-proof business. Considering that almost half the candidates who appear for various entrance examinations take private coaching, the size of the problem is staggering indeed.

Instead of a new regulator, the government would do well to realise that the coaching industry has taken root and is thriving only because of the failure to provide a good education system even at the elementary level. Pratham's Annual Status of Education Report showed children are actually learning less today in schools in rural India than in 2005. But the desire to educate children has never been higher. Enrolment is up to 97 per cent. Even poor parents are making sacrifices aplenty to spend money on tuition — the average tuition expenditure per child from families living in unfinished ("*kuccha*") homes is ₹146 a month. In this context, it is freeing up the supply side that matters. More schools and colleges with the aim of adding to the existing centres of academic excellence will have to be set up. Merely setting up a regulator for coaching institutes will be an attempt to bypass the central problem ailing India's education system.

Dainik Jagran ND 08/12/2015 P-04

दिल्ली-एनसीआर में प्रदूषण की वजह डस्ट व वाहन

वी.के.शुक्ला, नई दिल्ली

- आइआइटी कानपुर के अध्ययन में सामने आया सच
- प्रदूषण पर दिल्ली सरकार को सौंपी 300 पन्नों की रिपोर्ट
- दूसरे राज्यों में चल रहे लगभग चार हजार ईंट-भट्टे भी हैं प्रमुख वजह

दिल्ली और एनसीआर में किस माध्यम से कितना प्रदूषण फैल रहा है, इस पर किए गए अध्ययन की आइआइटी कानपुर ने दिल्ली सरकार को 300 पन्नों की रिपोर्ट सौंप दी है। कुछ दिन पहले सौंपी गई रिपोर्ट के मुताबिक दिल्ली और एनसीआर में सबसे अधिक प्रदूषण वाहनों तथा डस्ट (धूल) से हो रहा है। खाली पड़े प्लॉट व सड़क किनारे पड़ी धूल प्रदूषण फैला रही है। इसके अलावा बड़े स्तर पर ऊंची इमारतों के निर्माण से भी प्रदूषण फैल रहा है। रिपोर्ट में दिल्ली के आसपास दूसरे राज्यों में चल रहे लगभग चार हजार ईंट-भट्टों का भी जिक्र किया गया है। रिपोर्ट के मुताबिक ईंट-भट्टे भी वायु को प्रदूषित कर रहे हैं। इसी प्रकार हरियाणा व पंजाब में जलाई जाने वाली पराली का भी जिक्र प्रदूषण के प्रमुख स्रोत के तौर पर किया गया है। फैक्ट्रियों व कूड़े को भी प्रदूषण का स्रोत माना गया है। यह रिपोर्ट अभी सरकार ने सार्वजनिक नहीं की है।

दिल्ली सरकार के एक वरिष्ठ अधिकारी का कहना है कि आइआइटी कानपुर ने अभी रिपोर्ट का ड्राफ्ट सौंपा है। अध्ययन करने वाले विशेषज्ञों से अभी रिपोर्ट को लेकर चर्चा की जानी है। इसके लिए उन्हें बुलाया गया है। उनके आने पर रिपोर्ट को लेकर चर्चा की जाएगी। उसके बाद ही सरकार इसे सार्वजनिक करेगी।

ज्ञात हो कि दिल्ली सरकार के पर्यावरण विभाग ने दिल्ली के प्रदूषण के बारे में आइआइटी कानपुर से पिछले साल अध्ययन कराए जाने के लिए संपर्क किया था। इसका मकसद यह था कि यह पता लगाया जा सके कि किस स्रोत से कितना प्रदूषण फैल रहा है। आइआइटी कानपुर के विशेषज्ञ पिछले कुछ माह से अध्ययन कर रहे थे।

Business Line ND 08/12/2015 P-01

H-1B visa woes hit US job offers to IIT grads

Tight norms have seen firms not being able to secure visas for those selected

DEEPA NAIR

Mumbai, December 7

Even though the Indian Institutes of Technology (IITs) have seen a rise in the overall number of job offers, there has been a decline in offers for onsite roles from US multinationals. This has happened primarily due to issues with availability of adequate number of H-1B visas.

According to placement officials, while US-based firms like Oracle, Visa Inc and Microsoft have participated this year, they have made fewer offers. Facebook, Twitter and Uber also did not make any international offers this year.

Internet giant Google preferred to go through the pre-placement route this year and made offers to only those students who had completed a three-month internship with the firm. Ankur Agarwal, Student Placement Coordinator at IIT-Khargpur, said that Google visited its campus for final placements but did not make an offer.

"We have seen a few companies offering US roles drop-out, as during the past few years the visa norms have become more stringent. So there have been cases where companies have hired students but have not been able to secure H-1B visas for them. They, then, have had to move them to another international office," said Atul Shukla, Placement-Coordinator at IIT-Bombay.

The US grants 65,000 H-1B visas every year. In 2014, the US Citizenship and Immigration Services (USCIS) received 172,000 more applications than the number of H-1B visas it can grant, forcing it to decide on the successful applicants through a computerised draw of lots.

Interestingly, four out of the eight students from IIT-Delhi who received international offers during placements this year rejected them for domestic roles.

However, IIT-Bombay has seen more international roles offered for Japan and South-East Asian countries like Taiwan. Japanese firm Works Applications has made nine offers at IIT-Guwhati this year, said Harish Bohara, Overall Coordinator of Placements. Domestic offers, nevertheless, have seen a major increase in all IITs with core engineering firms and start-ups leading the way. IIT-Bombay has seen 500 students placed so far from 100 companies across different sectors such as finance, consulting, core engineering and software. Ecommerce firms and start-ups such as Ola Cabs, Roadrunnr, Grofers and Codenation have made several offers across IITs.

The US grants 65,000 H-1B visas every year. In 2014, it received 172,000 more applications than the number of H-1B visas it can grant

Bohara from IIT-Guwhati said that compensation packages have seen an average increase of 15 per cent this year.

The first phase of placements at IITs began on December 1.

Hindustan Times ND 08/12/2015 P-14

We're down the learning curve

India's consistently low position in the higher education rankings makes it imperative that the government steps in boldly, writes GURSHARAN SINGH

China is producing 22,000 PhD holders annually as against 8,000 by India. Public spending on higher education needs to be doubled from the existing 0.6% of GDP PRAVEEN BAJPAI/HT

India could not make any significant headway in the world ranking of its institutions of higher learning this time either, according to the recently released The Times Higher World University Ranking 2015-16. However, some marginal improvement over the previous editions was noted after the list was expanded to 800 from 400. But none of our institutes was in the top 200; getting ranked among the top 100 universities remains a distant dream. Only five Indian institutes could be listed in the top 500. While the Indian Institute of Science (IISc), Bangalore, secured a place in the block 251-300, the other four are IITs (Bombay, Delhi, Kharagpur, Madras) falling in the range of 351-500 of the ranking. However, there can be some solace that in subject-wise ranking, IISc could secure 99th position in engineering and technology. In Asia, the National University of Singapore holds top place (26th overall) while China further improved its ranking with Peking and Tsinghua Universities placed at 42nd and 47th positions, respectively.

Any well-known ranking system for universities or institutes of higher learning places the quality of research as the most important performance indicator. For instance, Times Higher Education determines the status of an institute based on 13 performance indicators, grouped into five broad categories related to teaching, research, citation, industry income and international outlook. Of these, the quality of research and its citation remains the most important criterion and accounts for 60% of the score. Industrial collaboration in research and income from the same is another important indicator.

From time to time, educationists and scientists have been advising the government about much-needed reforms in the Indian system of higher learning. The recent statement by CNR Rao, an acclaimed scientist and Bharat Ratna awardee, is yet another strong reminder of that. Rao lamented that India's contribution to world science today is only 2.5% against 15% by China, which is now aspiring to be number one after crossing the 16% contribution by the US. We need to discuss and fill the gaps in our strategic planning to compete globally.

There is 35-40% faculty shortage in our institutes of higher education and even up to 90% of the budget is spent only on salaries, leaving highly inadequate amounts for research. Lack of passion and motivation in the faculty to bring in competing projects is another impediment in the way of quality research. The faculty conducts only student-based research. Further, the research done by the students is also not properly planned or monitored and it often lacks international or industrial collaboration. The extremely dismal state of research in higher education in our country can be gauged from the fact that PhD dissertations are sold. It is pointless to expect quality research from someone who has been awarded the doctorate degree undeservingly, ignoring the merit of the work undertaken. It is a pity that roping in examiners to sign the required papers in the matter of evaluating theses/dissertations has become a routine affair. Almost everyone will get the degree he has applied for, sooner or later. What is the rejection rate of our theses/dissertations? Probably less than even 1%; there may be institutes/departments where a thesis has never been rejected. On the contrary, in US universities, even under highly favourable conditions, only three-quarters of PhD students complete their work. This warrants careful introspection. Above all this, we are also unable to produce the desired number of researchers and thus fail even on quantitative terms. China is now producing 22,000 PhD holders annually as against 8,000 by India.

AT LEAST 30% OF THE TEACHING FACULTY SHOULD BE FROM OUT OF THE STATE AND IT SHOULD BE MADE MANDATORY FOR FACULTY MEMBERS TO HAVE COLLABORATION WITH INSTITUTIONS IN INDIA AND ABROAD

Our universities do not have any worthwhile liaison with industry for conducting need-based research. For instance, only 38 students could get the Prime Minister's Doctoral Fellowship (up to ₹6 lakh per annum) for pursuing their PhD programmes, out of 100 fellowships available, during the past year. The reason was that sponsorship from industry was a pre-requisite to fund the research done by the student, something which the universities could not secure. This is a comment on our inability to strike collaborations with industry for research output. Granting patents indicates the applicability of research. A comparison of patents in 2011 shows Japan comes first with as many as 238,323 patents, followed by the US with 224,525 and China with 172,113. India ranked 17th with only 5,170.

Though starting new universities and colleges is a positive sign, if we are unable to provide faculty even for the existing ones, it becomes questionable. The issue of alarming vacancies in the teaching staff of our universities and colleges needs to be addressed by making the profession attractive. Further, faculty competency should be built through international exposure since it is the pre-requisite for doing cutting-edge research to compete globally. Teachers' reluctance to move out their home states to serve or learn has become a serious concern, impacting the quality of research. In most Indian universities, a majority of the faculty belongs to the same state or region, with all the three degrees (bachelor's, master's and doctorate) from the same or local universities.

Governments (both in the states and the Centre) need to take certain bold measures. The salary of the faculty needs to be linked to the performance of a teacher in terms of research projects, quality publications/patents, etc. Recruiting at least 30% faculty should be done from out of the state and it should be made mandatory for each faculty member to have collaboration in research with reputed national and international universities/institutions. Special incentives should be given for industry-linked research. The faculty's international exposure should be facilitated. The accreditation of all the institutes of higher learning should be mandatory; and the issue of faculty vacancy should be addressed before giving permission to open new universities and colleges. Public spending on higher education needs to be at least doubled from the existing 0.6% of GDP.

Gursharan Singh is professor and former dean of postgraduate studies, Punjab Agricultural University, Ludhiana
The views expressed are personal

Dainik Bhaskar ND 07/12/2015 P-03

छात्रों के अविष्कार में दिख रही सामाजिक सरोकार की झलक

आईआईटी दिल्ली में चल रहा है विज्ञान एवं प्रौद्योगिकी विभाग का 'इंस्पायर' कार्यक्रम

एस.के. गुप्ता | नई दिल्ली

आवश्यकता अविष्कार की जननी है। यह बात दिल्ली आईआईटी में स्कूली छात्रों द्वारा लगाई गई प्रदर्शनी से प्रतीत होता है। जहां छात्रों की ओर से दैनिक आवश्यकताओं को ध्यान में रखकर ऐसे-ऐसे इनोवेशन प्रोजेक्ट बनाए गए हैं कि आप उन्हें देखकर दांतो तले अंगुली दबा लें।

इन्हीं इनोवेशन प्रोजेक्ट को लेकर देश भर के विभिन्न राज्यों से आए छात्र सोमवार को गिनीज बुक ऑफ वर्ल्ड रिकॉर्ड में देश का नाम दर्ज कराने जा रहे हैं। दरअसल आईआईटी दिल्ली में चल रहे विज्ञान एवं प्रौद्योगिकी विभाग के 'इंस्पायर (आईएनएसपीआईआरई) कार्यक्रम के तहत राष्ट्रीय स्तर की प्रदर्शनी चल रही है। इसके तहत राज्य स्तरीय प्रतियोगिताओं के आधार पर चयनित छठी से दसवीं कक्षा के करीब 800 छात्र अपने इनोवेशन मॉडल का प्रदर्शित कर रहे हैं।

इनमें से 60 सर्वश्रेष्ठ प्रोजेक्ट को शॉर्टलिस्टिड कर सर्वश्रेष्ठ तीन इनोवेशन प्रोजेक्ट को पुरस्कृत किया जाएगा।

रसोई गैस का सस्ता विकल्पः बिलासपुर से कक्षा दसवीं की छात्रा जमुना निषाद ने एलपीजी रसोई गैस का सस्ता विकल्प इजाद किया है। कांच के तीन जार लेकर, एक जार में पेट्रोल एक में पानी और एक में केरोसिन डालकर, इन्हें एक दूसरे से कनेक्ट किया और पानी वाले जार को हवा भरने वाले पंप से कनेक्ट कर पंपिंग करने के बाद रसोई गैस चूल्हे को जलाया तो वह जल उठा।

आज बनेगा नया कीर्तिमान

आईआईएसएफ 2015 में सोमवार को (7 दिसंबर) को 2,000 स्कूली छात्रों के द्वारा सबसे बड़े व्यावहारिक विज्ञान प्रयोगशाला के तौर पर एक विश्व रिकॉर्ड बनाया जाएगा। वर्तमान में यह विश्व रिकॉर्ड 1,339 आयरिश स्कूली बच्चों के नाम है। गिनीज बुक ऑफ वर्ल्ड रिकार्ड के अधिकारी इस दौरान मौजूद रहकर रिकॉर्ड को देखेंगे और प्रमाणित करेंगे।

छेड़खानी पर 140 वाट का करंट

मध्यप्रदेश मंदसौर से आई निशा दंडिग बताती है कि वह कक्षा दसवीं की छात्रा है। अक्सर लड़कियों के साथ छेड़खानी की घटनाएं होती हैं, छेड़छाड़ करने वाले को सबक सिखाने के लिए दस्तानों की सहायता से 140 वॉट का झटका देने के लिए यह इनोवेशन किया है। इसके तहत दस्तानों में चिप लगाई गई है, जिन्हें इलेक्ट्रॉनिक मोटर से जोड़ा गया है। जैसे ही आप बटन दबाएंगे छेड़छाड़ करने वाले को इलेक्ट्रिक शॉक लगेगा।

कॉल करते ही बाइक हो जाएगी जाम

उड़ीसा से आए आठवीं कक्षा के यशोबंता साहू ने बाइक चोरी पर इनोवेशन प्रोजेक्ट बनाया है। खास बात यह है कि एक मोबाइल को बाइक के साथ जोड़ा गया है, जैसे ही चोर आपकी बाइक स्टार्ट कर भागेगा, आपके मोबाइल पर एसएमएस आएगा और जैसे ही आप बाइक में रखे मोबाइल पर कॉल करेंगे, बाइक का इंजन जाम हो जाएगा और बाइक चलेगी नहीं।

Dainik Jagran ND 07/12/2015 P-04

गंदे पानी को स्वच्छ बनाएगा जलदूत

भारत अंतरराष्ट्रीय विज्ञान महोत्सव में अपनी खोज के साथ पहुंचे विशेषज्ञ

शैलेंद्र सिंह, नई दिल्ली

दूषित जल की समस्या से देश के हर राज्य के लोग जूझ रहे हैं। दूषित पानी पीने से कई तरह की बीमारियां होने का खतरा रहता है। ऐसे में गंदे पानी को पीने योग्य बनाने के लिए विशेषज्ञ कई तरह की तकनीक इजाद कर रहे हैं। ऐसी ही कुछ नई तकनीक भारतीय प्रौद्योगिकी संस्थान (आइआइटी), दिल्ली में चल रहे भारत अंतरराष्ट्रीय विज्ञान महोत्सव में भी देखने को मिल रही है। जलदूत जहां नदी, नाले व तालाब के पानी को मिनटों में साफ कर पीने योग्य बना रहा है, वहीं मोहाली के इंस्टीट्यूट ऑफ नैनो साइंस एंड टेक्नोलॉजी ने ऐसा फिल्टर तैयार किया है जो न सिर्फ घर के प्रदूषित जल बल्कि फैक्ट्रियों से निकलने वाले पानी को भी पलभर में पीने योग्य बना सकता है।

पानी को साफ कर पीने लायक बनाने वाली मशीन।

नैटो टक्नोलॉजी से बने वाटर प्यूरिफायर को दिखातीं मनु शर्मा।

कैसे काम करता है जलदूत : जलदूत ऑटो रिक्शा पर उपलब्ध एक प्रकार का चलता-फिरता जल शोधन संयंत्र है। इसमें पांच सौ लीटर पानी को शोधित करने की क्षमता है और टोकन के माध्यम से मात्र 30 पैसे प्रतिलीटर पर इसका पानी उपलब्ध कराया जा सकता है। इस संयंत्र को लेकर महोत्सव में पहुंचे सचिन कुमार ने बताया कि अल्ट्रा फिल्टरेशन टेक्नोलॉजी पर काम करने वाले इस संयंत्र की मदद से नदी, नाले, तालाब के पानी को स्वच्छ कर पीने के योग्य बनाया जा सकता है। उन्होंने बताया कि मात्र पांच लाख रुपये की कीमत में तैयार होने वाले इस जल शोधन संयंत्र के जरिए आसानी से आमजन को उनके घर के बाहर स्वच्छ जल पहुंचाया जा सकता है। इसका इस्तेमाल कर्नाटक व ओडिशा में हो रहा है।

- नैनो मैटीरियल से साफ होगा घर व फैक्ट्रियों का प्रदूषित जल

घर व फैक्ट्रियों के गंदे पानी को करता है साफ : इंस्टीट्यूट ऑफ नैनो साइंस एंड टेक्नोलॉजी, मोहाली ने नैनो मैटीरियल से तैयार ऐसा वाटर फिल्टर तैयार किया है जिसकी मदद से आसानी से घर के गंदे पानी को स्वच्छ पानी में तब्दील कर पुनः उपयोग में लाया जा सकता है। इस प्रोजेक्ट से जुड़ी मनु शर्मा ने बताया कि इस फिल्टर को सात लेयर में तैयार किया गया है। जिसकी मदद से आसानी से दूषित जल पाइपलाइन में फिल्टर से साफ किया जा सकता है। इसके जरिए मात्र 25 रुपये में करीब 20 से 25 लीटर गंदा पानी साफ किया जा सकता है। इसको पेटेंट करने की प्रक्रिया जारी है। जैसे ही इस औपचारिकता को पूरा कर लिया जाएगा इसे बाजार में लाने की कोशिश शुरू हो जाएगी।

Mint ND 07/12/2015 P-6

PLACEMENTS CHEER

IIT graduates see higher salary offers

By Bidya Sapam
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MUMBAI

Engineering students at Indian Institutes of Technology (IITs) are winning job offers with salaries that are up to 15% more than last year at the annual placements that began on 1 December, said officials at these institutions, indicating better hiring sentiment.

At IIT Bombay, Kharagpur, Kanpur and Roorkee, around 30-40% of the students won job offers by the end of the third day of the placement, the officials said on condition of anonymity.

"Last year was a record year for us with over 1,000 students already placed in the first phase (which lasted about seven days) itself. We expect this year to be even better since more than 500 students have already been placed in just three days," said a student coordinator at IIT Bombay's placement cell, who declined to be identified.

The student coordinator did not reveal salary packages received by the students but said that there has been a marginal increase of around 5-10% over last year. More than 1,200 final-year engineering students at IIT Bombay are participating in the placement season that will go on till 22 December.

> IT, financial firms dominate first week of placements, along with some large start-ups

Large IT and global financial companies dominated the first week of placements, along with some large start-ups. While multinational companies such as Google, Microsoft, Goldman Sachs, Morgan Stanley, American Express, Visa and Credit Suisse have grabbed some of the top talent in the first two days, big start-ups like Flipkart, Snapdeal and Ola are not far behind.

Apart from software engineers, placements saw huge demand for non-technical job profiles such as data analysts, business analysts and operational managers from firms across sectors.

IIT Bombay has already received more than 500 job offers, while other premier IITs, including Kharagpur, Kanpur and Roorkee, have got more than 300 offers. On the first day itself, 100 job offers were made to students of IIT Madras.

According to Babu Vishwanath, placement adviser at IIT Madras, pay packages in some cases have reached $120,000, particularly from global IT firms. However, the institute has put on hold its placement activity due to heavy rains in the city.

IIT Delhi declined to provide details of the number of job offers received so far.

At IIT Roorkee, more than 90% of students placed have received salary packages between ₹15 lakh to ₹20 lakh a year. N.P. Padhy, professor in charge, training and placement office at IIT Roorkee, said it had received nearly 300 offers by the end of the third day, while it took four days to cross the figure last year. "In the last 48 hours, we have received an overwhelming number of job offers. This year, it has crossed our expectations. We are seeing an improvement on the average salary packages by about 10-15% as compared to last year."

About 300 offers have come through for students at IIT Kharagpur and Kanpur as well, mostly from IT, consulting and financial firms. Firms such as Rolls Royce, Mercedes, Airbus and Uber also recruited in the first three days.

"We have gone the traditional way and have given slots to the large core and IT companies in the first two-three days. We do not encourage start-ups this time for the simple reason that there is too much uncertainty with them, be it financial or their businesses," said Sudhirkumar Barai, chairman, career development centre at IIT Kharagpur.

The number of start-ups hiring from these institutes has almost doubled over last year. Most start-ups, apart from large e-commerce firms, have been given slots to recruit students from Days 3 and 4 onwards.

Millenium Post ND 07/12/2015 P-04

IT the crowd-puller at IIT-D, startups most favoured option

PIYUSH OHRIE

NEW DELHI: The Information technology (IT) sector is the most popular sector as witnessed from the first four days of placements at IIT-Delhi.

Over 40 per cent of the placements have taken place in this sector, followed by recruitments in consulting and core technical departments at 21 per cent. The minimum placement has been seen in analytics sector at 4 per cent as of now.

The number of job profiles provided by organisations saw an increase by 10 per cent, with the total number of job offers excluding the preferred provider organisation (PPO) in the first four days crossing 400.

Many have turned down high packages and overseas offers to work with startups

An average base package pay of $100,000 per annum has been set by most of the technology companies.

As most of the technology companies are US based, many international positions are being offered to students in the USA.

However, many Japanese companies have provided placements in India itself with an average increase in the overall package at 10-20 per cent.

Startups, too, have made their presence felt at the placements in the premier engineering institute as many students, despite getting very high packages from reputed companies, have turned down the offers and expressed their desire to work with startups.

"There can be two reasons as to why most of my friends are opting for working in startups. First, most international companies are offering jobs outside India. Secondly, working in a startup provides us with more opportunities to hone our entrepreneurial skills," said a student, requesting anonymity.

Asian Age ND 07/12/2015 P-14

■ Revamped plan includes penalty provisions for false complaints

JNU notifies new sexual harassment policy

New Delhi, Dec. 6: The Jawaharlal Nehru University, which received maximum number of sexual harassment complaints by any educational institution in Delhi in the last two years, has notified a revamped sexual harassment policy that also includes penalty provisions for false complaints.

According to a Delhi Commission for Women (DCW) report, 101 cases of sexual harassment were reported from various universities in Delhi, barring the Delhi University, since 2013. Of these, about 50 per cent were reported in JNU. The DU had not submitted the list of such cases.

JNU has Gender Sensitisation Committee Against Sexual Harassment (GSCASH), a central body which deals with complaints of this nature from across the university departments.

The panel had submitted a draft of the revised rules and procedures in accordance with the 2013 guidelines of the Supreme Court to vice-chancellor S.K. Sopory in September this year which has been approved by the varsity's executive council.

● According to a DCW report, 101 cases of sexual harassment were reported from various universities in Delhi, barring the DU, since 2013

One of the major amendments in the policy is introduction of a provision for protection from victimisation of the complainant as well as witnesses besides a penalty provision for false complaints.

The revamped policy also has different clauses for "sexual harassment at workplace" and "sexual harassment in academic spheres" and for re-appealing if the complainant is dissatisfied with GSCASH's decision.

According to the notified policy, "If the committee finds that a complaint registered by a person is false, he or she will be served a showcause notice to detail the reasons behind doing so." "In the event of no, insufficient, or unconvincing explanation, GSCASH shall forward its findings to the appropriate university authority for further action which might include a restraint order, change in hostel or a disciplinary action," it says.

The university will also ensure that the defendant does not evaluate the examination or supervise the research of the complainant and vice versa to ensure there is no victimisation. — *PTI*

IIT दिल्ली के प्लेसमेंट में मेक इन इंडिया की धाक

इस प्लेसमेंट सीजन में आईआईटी-दिल्ली में मेक इन इंडिया की जबरदस्त धाक रही।

यहां के चार स्टूडेंट्स ने विदेश में जॉब और मोटी सैलरी को ठुकरा कर देश में काम करने का फैसला किया है। इन चारों स्टूडेंट्स को सालाना 1 करोड़ रुपये से भी बड़ा पैकेज ऑफर किया गया था। हालांकि, इन लोगों ने बहुत कम सैलरी पर देश में कोर इंजीनियरिंग स्पेस में काम करने का फैसला किया है। प्लेसमेंट से जुड़े अधिकारियों ने कहा कि टोटल 8 इंटरनेशनल ऑफर आए थे। इस मामले में प्लेसमेंट सेल से जुड़े एक अधिकारी ने कहा, 'ये वो इंटरनेशनल कंपनियां हैं, जो हर साल प्लेसमेंट के लिए आईआईटी आती हैं।' हालांकि, उन्होंने इस मामले में कुछ और बताने से इनकार कर दिया। यहां हर साल रिक्रूटमेंट के लिए आने वाली कंपनियों में गूगल, वीजा, ऑरिकल और माइक्रोसॉफ्ट शामिल हैं। पेज 7

IIT-D के प्लेसमेंट में चला मेक इन इंडिया

| प्राची वर्मा | नई दिल्ली |

इस प्लेसमेंट सीजन में आईआईटी-दिल्ली में मेक इन इंडिया की जबरदस्त धाक रही। यहां के चार स्टूडेंट्स ने विदेश में जॉब और मोटी सैलरी को ठुकरा कर देश में काम करने का फैसला किया है। इन चारों स्टूडेंट्स को सालाना 1 करोड़ रुपये से भी बड़ा पैकेज ऑफर किया गया था। हालांकि, इन लोगों ने बहुत कम सैलरी पर देश में कोर इंजीनियरिंग स्पेस में काम करने का फैसला किया है। प्लेसमेंट से जुड़े अधिकारियों ने कहा कि टोटल 8 इंटरनेशनल ऑफर आए थे।

इस मामले में प्लेसमेंट सेल से जुड़े एक अधिकारी ने कहा, 'ये वो इंटरनेशनल कंपनियां हैं, जो हर साल प्लेसमेंट के लिए आईआईटी आती हैं।' हालांकि, उन्होंने इस मामले में कुछ और बताने से इनकार कर दिया। यहां हर साल रिक्रूटमेंट के लिए आने वाली कंपनियों में गूगल, वीजा, ऑरिकल और माइक्रोसॉफ्ट शामिल हैं। एक शख्स ने बताया कि जिन चार स्टूडेंट्स ने देश में काम करने को तरजीह दी है, उन्हें ओवरसीज कंपनियों के मुकाबले सिर्फ एक चौथाई सैलरी मिलेगी। उन्होंने कहा कि अभी तक विदेश में नौकरी को ज्यादा पसंद किया जाता था, लेकिन यह सामान्य ट्रेंड में आया जबरदस्त बदलाव है।

IIT दिल्ली के चार स्टूडेंट्स ने लोकल कोर इंजीनियरिंग जॉब के लिए छोड़ा विदेश में करोड़ों का पैकेज

कैंपस प्लेसमेंट में पहले दिन आने वाली कंपनियों में कंसल्टिंग, फाइनेंस, टेक्नोलॉजी और ई-कॉमर्स कंपनियां बड़ी तादाद में थीं। नरेंद्र मोदी सरकार इंस्टीट्यूट्स, एकेडमी और इंडस्ट्री को मेक इन इंडिया कैंपेन के लिए बढ़ावा दे रही है, जिससे भारत मैन्युफैक्चरिंग हब के तौर पर उभर सकता है। इससे यहां रोजगार बढ़ेगा और ग्रोथ में भी तेजी आएगी। आईआईटी बॉम्बे में भी इस साल प्लेसमेंट के पहले दिन कोर इंजीनियरिंग कंपनियां ज्यादा रहीं। पिछले साल के मुकाबले इस साल आईआईटी बॉम्बे में कोर इंजीनियरिंग कंपनियों को ज्यादा स्लॉट मिला।

आईआईटी बॉम्बे प्लेसमेंट सेल के एक शख्स ने बताया कि इस साल 172 ऑफर्स में से 60 कोर कंपनियों ने दिए हैं जबकि पिछले साल यह आंकड़ा 174 में से सिर्फ 35 था। आईआईटी रूड़की और आईआईटी गुवाहाटी में यह बदलाव अगले साल से नजर आ सकता है।

Financial Express ND 07/12/2015 P-12

Indian universities should invest far more in research

HEENA KHANDELWAL

"Why emerging economies need world-class universities?" This was the theme of the three-day Times Higher Education (THE) Summit 2015 that was held last week in Delhi where President Pranab Mukherjee described quality of education as a challenge in India. "Higher education sector in India must align itself to the world education sector," he said. He also asked universities to encourage mobility of individuals across the world.

While along with President Mukherjee, many delegates including OP Jindal University's founding chancellor Naveen Jindal and THE World University Rankings Editor Phil Baty spoke for world-class universities, New York University Shanghai's vice-chancellor Jeffrey S Lehman questioned the durability of world-class universities. He said while we are making investments to create world-class universities, we should also think what will happen if the political climate changes, hinting at the interference of external or government's influence in the education system.

File photo of IIT Bombay, which was ranked among top 30 in the Times Higher Education BRICS and Emerging Economies rankings for 2016

Times Higher Education BRICS and Emerging Economies rankings for 2016 were also released at the summit where 16 Indian educational institutes made to top 200 universities. While the Indian Institute of Science, Bangalore, made its debut in the top 20 and IIT Bombay occupied a space for itself in the top 30, China dominated the rankings by occupying first and second places. In the top 10, China has five of its institutes, followed by two from South Africa and one each from Russia, Taiwan and Brazil.

When asked what makes a university world-class, Phil Baty said that it is components such as teaching excellence, research experts and an environment producing new information. "Universities should have an international outlook," Baty said. On the rankings, Baty added, "We are putting less emphasis on research and more on industry relations."

Baty also said that a separate ranking system for BRICS and emerging economies is needed because many good universities generally get crowded out of world rankings because of dominance of other universities.

As far as the Indian education sector is concerned, Baty added that there is room for diversity. "While some universities should focus on skills and training people for the jobs, others should focus on research and competing at the global level. A country like India needs some of its universities to be of the global standards. If you focus only on the national role, you might lose sight on global. If India creates more world-class universities and good opportunities for teachers, the best faculty can be retained and global faculty can also be attracted."

On the strengths and weaknesses of Indian universities, Baty said, "Indian universities have a very strong reputation of outstanding teaching standards. The weakness is that they do not invest enough in research."

While some universities should focus on skills and training people for the jobs, others should focus on research and competing at the global level

Mint ND 07/12/2015 P-6

HOW THE STATE CAN FOSTER INNOVATION

VIEW FROM IIMA

RAKESH BASANT

Respond to this column at feedback@livemint.com

Innovation and entrepreneurship are buzzwords in India today. Analyses of their potential roles not only permeate the discussion around Startup India, Standup India, but also figure in discussions on Make in India and Skill India initiatives as the latter two are expected to benefit from innovation-driven entrepreneurship, especially new ventures. It is imperative that the synergies among these three major initiatives are systematically reaped. While a detailed understanding of various linkages across these programmes would require more rigorous analysis, it would be useful to focus on the role of the state and higher education institutions (HEIs) in creating an ecosystem where technology entrepreneurship can flourish.

The role of venture capital (VC) and incubation to support start-ups are increasingly seen as critical for fostering innovative enterprises. Historical evidence, however, suggests that in a healthy innovation ecosystem, while VCs and start-ups are important contributors for stimulating innovation, they can never be a substitute for other sources of innovation, namely vibrant higher education institutions and research and development (R&D) undertaken in the large corporate sector—both public and private. In this context, can the government effectively promote VC and innovation-driven entrepreneurship? Most argue, and rightly so, that the critical contribution of the government is to provide stable policies that make doing business easier. While there has been a lot of scepticism about the government being a source of innovation, many recent empirical studies have painstakingly documented the critical role that the state has played in fostering innovation and entrepreneurship, even in places like the Silicon Valley. It is being recognized that both state-supported research as well entrepreneurial capital are necessary (though not sufficient) conditions for innovation. The efficacy of state initiatives not only depends on the extant ecosystem but also on the nature of intervention.

Studies suggest that the financing of innovation is likely to be more successful in situations where: (i) the public sector spends large sums on education, research and those emerging sectors where high capital intensity and technological or market risks result in under-investment by the private sector; (ii) large companies reinvest their profits in human capital and R&D; (iii) the tax policy rewards long-run investments rather than short-run capital gains; and (iv) contestable markets along with a rigorous competition policy does not allow successful incumbents to become lazy.

But what should be the nature of state financing?

Apart from research grants, governments worldwide are also providing entrepreneurial capital. The centre has also announced a ₹10,000-crore fund for start-ups that will be implemented by Sidbi. Innovation requires sustained support, and short-term perspective for financial markets is not conducive for the growth of innovation-driven start-ups. Private VC firms typically do not provide patient capital needed for radical innovations. In any case, the focus of VCs on early and profitable 'exit' results in limited investments by them in early-stage technology-driven start-ups. Such a tendency is more prominent in economies like India (though there are some signs of change) where financial markets are not mature enough to create several opportunities of exit. Therefore, the creation of a start-up fund by the centre is very welcome. However, the efficacy of this initiative would depend on how this money is deployed. There is some evidence to suggest that matching funds from the private sector often enhances the quality of due diligence and of mentoring and other support. Therefore, the deployment of these funds through a public-private partnership (PPP) vehicle may be desirable.

One such experiment, INFUSE, is currently underway to support innovative start-ups in the clean energy sector. This is clearly a sector where capital investments and technology and market risks are usually high, especially in comparison to information and communications technology enterprises, which dominate the start-up movement in India. The ministry of new and renewable energy provided resources to the Centre for Innovation, Incubation and Entrepreneurship (CIIE) at the Indian Institute of Management, Ahmedabad (IIMA) to seed a fund for supporting clean energy start-ups. The understanding was that CIIE at IIMA would raise matching funds from the private sector and operate a venture fund registered with the Securities and Exchange Board of India. CIIE surpassed expectations and raised more than matching resources from private entities to set up the INFUSE fund, which it now operates professionally, wherein the due diligence is overseen by an independent investment committee. This public-private academia partnership can potentially be a model for deploying the new start-up fund. Available resources can be used to seed the creation of venture funds for sectors where the market and technological risks apart from other types of market failures are high. Such a model to provide entrepreneurial capital for early-stage entities can bring in advantages of 'syndication' through its PPP element and also reduce the chances of government failures.

HINDUSTAN TIMES

Way forward: *Efforts to create spaces for different disciplines to interact can be a potent force to unleash innovation-driven entrepreneurship.*

Externalities play an important role in creating and nurturing an innovation ecosystem. The ecosystem comprises individual inventors, large corporates, HEIs, entrepreneurs, VCs, angel investors, consumers, vendors, employees, service providers and governments. Start-ups and VCs not only benefit from the existence of their peers but also by the actions of others through what is referred to as a spillover effect. The role of HEIs as a source of research that can be taken to the market, skills as well as entrepreneurs has been stressed. One aspect that has remained underemphasized is the nature of the universities in these innovative clusters. These are large, multi-disciplinary, research-intensive entities with spaces for different disciplines to interact. Innovation and entrepreneurship are multi-disciplinary activities; the interaction of science, engineering, design, management, humanities and other disciplines provide a fertile ground for nurturing and growing innovative ideas. Unlike the West, India does not have universities where such interactions happen. At a few universities where such possibilities exist, the silo culture and lack of interaction spaces come in the way.

COLUMN

In the short run, it does not seem possible to create such research-intensive and multi-disciplinary universities in India. But fortunately, there are several city clusters where high-quality HEIs representing different disciplines co-exist. In many of these clusters, other elements of the entrepreneurial ecosystem are also present. Efforts to bring these institutions together around innovation and entrepreneurship-related activities—joint courses, research, co-incubation, etc.—can be a potent force to unleash innovation-driven entrepreneurship. The policy of supporting incubation centres in specific institutions is administratively easier but does not exploit spillovers and economies of scale and scope. Policy instruments that provide incentives for joint activities among these institutions can go a long way in creating the requisite entrepreneurial culture.

For starters, can we have a dedicated transport service connecting these institutions in a few clusters?

Rakesh Basant is a professor of economics area at IIMA. A former consultant to the World Bank, his research interest includes technology change and management, intellectual property rights, industrial organization, public policy (especially competition and technology policies), inter-firm alliances, industrial clusters and labour markets.

Indian Express ND 07/12/2015 P-7

President bats for AYUSH centres at IITs

New Delhi: President Pranab Mukherjee, who recently got the department of traditional Indian medicine (or AYUSH) to set up a wellness centre in the President's estate, has suggested that all centrally-funded institutions should follow suit.

Mukherjee, who is head of all higher education institutes funded by the Centre, said this during the conference of all heads of IITs, NITs and central universities in the first week of November. "It will deliver the benefits of alternate systems of medicine to higher education networks, and lead to its further refinement, innovation and research," stated the minutes of the conference. **ENS**

IISc scientists develop solar-powered desalination system

Bengaluru: Dec 07, 2015, DHNS:

http://www.deccanherald.com/content/516201/iisc-scientists-develop-solar-powered.html

Two scientists from the Indian Institute of Science (IISc) have developed a low-cost and low-maintenance solar hybrid desalination system that converts sea and brackish water to potable water.

Talking about the inspiration behind the desalination system, Dr Ravinder Kumar from the Department of Electronic Systems Engineering (DESE), IISc said, "In 2004 when I was in Chennai, there was a huge water crisis and people were struggling to even get water tankers to their homes. That was my starting point to think about this. There was a vast amount of sea water next door but people were still suffering."

The system uses flash evaporation and subsequent condensation to desalinise sea water. "Evaporation of water under normal atmospheric pressure requires more energy than flash evaporation. Through flash evaporation, what we did was vary the pressure inside the evaporation chamber so that water can evaporate at any temperature, not just at 100 degrees," said a release from IISc. The energy required for flash evaporation is supplied by solar concentrators, which are essentially Scheffler dishes used as concentrators of solar energy. The concentrators raise the temperature inside the evaporation chambers, the press release added.

Subsequently, to pump water into chambers, photovoltaic panels are used as a source of energy. According to Dr Kumar, the success shown by this system shows promising signs that "the problem of clean drinking water can be solved in any coastal area where seawater and sunlight is available freely."

Construction of massive desalination plants incurs huge costs and makes it unaffordable for developing countries. Also, using fossil fuels to power these desalination plants are expensive and results in environmental damage in the long run.

ISc Bengaluru Ranked 16th Among BRICS Institutes

http://wwntradio.com/2015/12/07/iisc-bengaluru-ranked-16th-among-brics-institutes.html

"Rankings help students make important decisions about their career and these also provide universities an opportunity to measure their own performance and chart out a course for further improvement", Phil Baty, editor-at-large of the Times Higher Education Magazine, told IANS during a visit here.

"Addressing delegates of *Times Higher Education* "BRICS and Emerging Economies" Universities" Summit here, the President said the higher education sector in India must align itself with the global education sector, adding that a world-class university in today's time is one that can address the global problems of society having the entire world as its constituency. Prof Devang V Khakhar, director, IIT Bombay, said: "We are extremely happy with the continuous progress that we are making in the world rankings". IIT Bombay has ranked 29 this year, up from 37 last year. "The recent rankings are a testament to the successful, ongoing evolution of our institute as a global education centre in the field of engineering education and research".

"India spends less than 0.88 per cent of its GDP on science research, compared to 2.76 per cent in the United States and 4.04 per cent in South Korea". The government has spoken about improving its universities and financial support, but is yet to implement an initiative in this area.

For Kathleen Modrowski, dean, Jindal School of Liberal Arts and Humanities, while Indian universities have much to achieve in terms of global rankings, Indians have made a definite mark. University of Calcutta and University of Delhi are at 137 and 154, respectively. Around 16 Indian institutes/universities featured in the top 200 rankings. The combined strength of the five BRICS nations can develop an educational eco-system for their citizens as well as for the world citizens.

With half of the top spots in the top 10 institutes and a total of 39 institutions in the top 200, China is far ahead of other BRICS and emerging nations, the rankings revealed. Taiwan came a distant second with 24 universities in the Top 200 and India emerged as the third best represented country.

If you can not find Indian universities among the top institutions of higher education in various global rankings, do not blame our academic standards but acknowledge the fact that a lot of research in the country is being done in vernacular languages, Union Human Resources Development Minister Smriti Irani recently suggested. "India will have to work harder to compete with other developing nations, such as Russian Federation, which have a higher proportion of institutions in the upper echelons of the table".

India does not look for ranking of universities by global agencies: Smriti Irani

http://economictimes.indiatimes.com/industry/services/education/india-does-not-look-for-ranking-of-universities-by-global-agencies-smriti-irani/articleshow/50074197.cms

NEW DELHI: India does not look for ranking of its educational institutions by international agencies to attract "clients", the Lok Sabha was informed today.

HRD Minister Smriti Irani said the ranking of institutions by global agencies are based on research and infusion of foreign faculty.
She said while granting a rank, they do not take cognisance of research taking place in regional languages as also the inclusive nature of government institutions which ensure that those unable to avail education in private.

"We do not look for ranking to attract clients," she said adding that for the government, education is a non-profit sector.

Irani was responding to supplementaries in the lower house on issues relating to the HRD Ministry.

She said the fact that global agencies do not take cognisance of institutions carrying out research in regional languages does not mean that the research quality is in any way poor. Their criteria is research conducted in English language.

In her written response on higher education and research, she said the government has signed educational exchange programmes and MoUs and joint statements with 53 countries and multilateral organisations.

She said an MoU with Australia on cooperation in the fields of education, training and research was signed in August during the third Australia-India Education Council meeting.

The objective of the MoU includes increase in cooperation across all education sectors -- schools, vocational education and training and higher education including technical and professional education.

The minister explained that the outcome of the MoU in terms of students who would benefit "is not quantifiable at this juncture."

AICTE has proceeded against 132 engineering institutions: Irani

132 private engineering institutions which failed to fulfil the norms laid down by the All India Council for Technical Education (AICTE) have been proceeded against in 2015-16

http://indianexpress.com/article/education/aicte-has-proceeded-against-132-engineering-institutions-government/

The All India Council for Technical Education (AICTE) in 2015-16 has proceeded against 132 private engineering institutions which failed to act on norms laid down by it, the government on Monday said.

This information was shared in the Lok Sabha by HRD minister Smriti Irani in a written reply to a member's question.

132 private engineering institutions, including 5 in the state of Rajasthan, which failed to fulfil the norms laid down
by the All India Council for Technical Education (AICTE) have been proceeded against by AICTE in 2015-16 after issuing a show cause notice and considering their explanation, Irani said.

"The penal action ranged from reduction in seats in some and even closure of 87 colleges," she added.

Responding to another question, Irani said that as per information received from Indian Council of Historical Research (ICHR), there is no proposal to draft in some new persons to rewrite certain aspects of Indian history.

Smriti Irani sanctions Rs 134 cr for AMU centre

BJP MP who faced protests in varsity in the past had met minister with students.

http://indianexpress.com/article/cities/lucknow/smriti-irani-sanctions-rs-134-cr-for-amu-centre/

FOLLOWING THE intervention of BJP MP Kunwar Bhartendra Singh, the Union HRD Ministry has approved Rs 134 crore for Aligarh Muslim University's (AMU) Kishanganj centre in Bihar. This is the first major funding that the university has received since the Modi government assumed power in 2014.
On December 1, the MP from Bijnor had met HRD Minister Smriti Irani along with a delegation of AMU students who represented the Sir Syed Minority Federation of India.

They had requested Irani that funds be sanctioned for AMU centres and also, a 150-room hostel — in the name of Jat King Raja Mahendra Pratap Singh — be constructed. Soon after, Irani had approved the funds for AMU's Kishanganj centre.

While Singh is now receiving support from teachers and even alumni of the university, he had faced protests in April from the students, after he was appointed as an AMU Court member. In the past, an FIR was also lodged against him for giving inflammatory speeches in Muzaffarnagar, following which riots had broken out in 2013.

When contacted, Singh said: “Obviously, nobody will want a person named in a riot case. I understand the situation… But you have to take the good things along with bad. I can only say that charges against me are politically motivated.

“I am really thankful that the opportunity to help AMU came my way. It (the university) provides excellent education. I believe that education is the only way to save poor people from falling in the trap of unemployment and criminal, divisive and self-defeating ideology,” he added. He also hoped that Irani would sanction the 150-room hostel to ease lodging problems at the AMU.

“The Kishanganj centre is located in a very poor locality… I appreciate the minister’s prompt action. In future also, I will extend all possible help to AMU,” Singh said. His father Raja Devendra Singh had completed his MBA from the varsity in 1959.

The proposal for the Kishanganj centre was pending with the HRD Ministry for some time now. Due to paucity of funds, the centre has been facing crisis.
When contacted, AMU Finance Officer Javed Akhtar said: “We have received the approval letter from the HRD Ministry regarding funds for the Kishanganj centre. MP Kunwar Bhartendra Singh, along with students, had met the minister in this regard. We are thankful to them.

“We have got a letter which mentions some conditions for allotment of funds. These are small conditions and will be fulfilled. Only one issue of recognition of our BEd course by National Council for Teacher Education is pending, which will be cleared soon,” he added.

Pervez Siddiqui, president of Sir Syed Minority Federation of India, too said Singh was instrumental in ensuring that Irani meets them at a short notice. “We will remain indebted to him… he helped us in presenting our case before the minister. His support also helped in bailing out our institution from financial crisis,” he added.