

Newspaper Clips

September 4-6, 2014

September 4

IITs Apex Body gets Two New Female Scientists

<http://www.jagranjosh.com/articles/iits-apex-body-gets-two-new-female-scientists-1409745920-1>

HRD Ministry Smriti Irani nominated two women scientists to the IIT council. Tessy Thomas and Vijayalakshmi Ravindranath will be taking an active part in the apex body of 16 IITs. This is for the first time that IITs have women scientist under its club. Earlier for ages, the council has been a den of male directors and scientist.

The two scientists appointed by the Ministry are qualified enough to act as role models. Thomas is in charge of Agni-4 missile project of Defence Research Development Organization and also was the first women to head India's missile programme. Ravindranath has been associated in the formation of National Brain Research Centre. She has even lent her hands on research for neurogenerative disorders that can be effective to develop disease modifying therapies.

Indian Express ND 04/09/2014 P-8

Most students in IITs from Jaipur, Delhi at No. 2

Six cities, including Patna, Mumbai, account for 40 per cent of successful candidates

MIHIKA BASU

MUMBAI, SEPTEMBER 3

SIX cities account for more than 40 per cent of students who qualified in the joint entrance examination (JEE-Advanced) of the Indian Institutes of Technology (IIT) this year, with Jaipur right at the top of the list, according to a detailed analysis by the joint implementation committee, released by IIT Kharagpur, the organising IIT in 2014.

The other five cities with most number of successful candidates are Delhi, Hyderabad, Vijayawada, Patna and Mumbai. The six cities account for 10,882 or 40.07 per cent of the candidates who qualified this year. While 1,26,995 candidates registered this year, 1,19,581 appeared in both papers and 27,152 candidates qualified JEE (Advanced) 2014.

From Jaipur, which occupies the top position, 2,780 students qualified as against 10,116 registrations. Similarly, 2,349 qualified from Delhi as against 9,385 registrations, 2,337 qualified from Hyderabad out of 8,170 registrations, 1,448 qualified from Vijayawada out of 5,275 registrations and 1,107 qualified from Patna as against 6,425 registrations. Mumbai, which occupies the sixth position, has 861 students qualifying as against 3,257 registrations.

JEE (Advanced) 2014 was conducted under seven zonal IITs, in 98 cities and one centre in Dubai.

In fact, more than half the candidates who qualified this year were from just 11 cities. The remaining cities include Pune (730), Visakhapatnam (715), Indore (665), Kolkata (646) and Lucknow (631). The 11 cities account for 14,269 or 52.55 per

CRACKING THE ENTRANCE: HOW THE CITIES FARE

11 cities account for 52.55% students who qualified JEE (Advanced) 2014	2014	2013
A Jaipur	2,780	Jaipur 2,188
B Delhi	2,349	Delhi 1,900
C Hyderabad	2,337	Hyderabad 1,702
D Vijayawada	1,448	Vijayawada 1,088
E Patna	1,107	Patna 710
F Mumbai	861	Mumbai 631
G Pune	730	Indore 608
H Visakhapatnam	715	Visakhapatnam 504
I Indore	665	Kolkata 482
J Kolkata	646	Pune 442
K Lucknow	631	Bhopal 441

cent of the qualified candidates.

According to academicians, good coaching facilities available to students in these cities contributed to their success.

An analysis of JEE (Advanced) 2013 reveals a similar trend. Last year too, the top six cities which had the largest chunk qualifying were Jaipur, Delhi, Hyderabad, Vijayawada, Patna and Mumbai, accounting for

38.93 per cent of students who qualified in 2013. Another similarity is that last year too, 11 cities had accounted for 50.66 per cent of the qualified students — or 10,696 students out of a total of 21,110 who qualified JEE (Advanced) 2013.

The 2014 IIT report further shows that overall city candidates did better — as against 67.67 per cent registration, 76 per cent qualified.

While 19.27 per cent registered from towns, 14.22 per cent qualified and 9.77 per cent from villages qualified as against 13.06 per cent registrations.

"The statistics of place of schooling has remained same as in 2013 with cities contributing 76 per cent of the qualified candidates and villages a mere 9.77 per cent. When one looks at the distribution of qualified candidates across the zones, Bombay and Madras together constitute 45 per cent of the total," says the report.

While no candidate qualified from Gangtok against 20 registrations, one each qualified from Itanagar (177 registered) and Port Blair (24 registered).

The data reveals that among the states, which have the maximum candidates qualifying, Andhra Pradesh (18.32 per cent), Rajasthan (15.81 per cent), Uttar Pradesh (12.21 per cent), Maharashtra (8.52 per cent) and Delhi (NCT) (6.61 per cent) occupy the top five positions.

आईआईटी में बढ़ेगी महिलाओं की संख्या

हरिभूमि ब्यूरो .नई दिल्ली

नरेंद्र मोदी की अगुवाई वाली नई सरकार के एक महत्वपूर्ण महकमे मानव संसाधन विकास मंत्रालय ने भारतीय प्रौद्योगिकी संस्थानों (आईआईटी) के ढांचे में महिलाओं की संख्या बढ़ाने की कवायद शुरू की है। हाल ही में एचआरडी मंत्रालय ने आईआईटी के ढांचे में देश की जानी मानी मिसाइल वैज्ञानिक और अग्नि पुत्री के नाम से चर्चित टे.सी.थामस को शामिल किया गया है। मंत्रालय के सूत्रों का कहना है कि जल्द ही इस

■ पीएम का महिलाओं को आगे लाने पर जोर

सूची में कुछ और चर्चित महिलाओं के नामों को भी शामिल किया जाएगा।

गौरतलब है कि प्रधानमंत्री नरेंद्र मोदी ने बीते 15 अगस्त को लालकिले की प्राचीर से देश के नाम दिए अपने संबोधन में भी महिलाओं से जुड़े कई अहम मुद्दों की ओर ध्यान आकर्षित किया था। साथ ही पीएम ने महिलाओं को देश में तमाम जगहों पर आगे लाने पर भी जोर दिया था।

काउंसिल का ढांचा

आईआईटी काउंसिल के ढांचे के हिसाब से देश के तमाम आईआईटी संस्थानों में शीर्ष पर विजिटर के रूप में राष्ट्रपति होते हैं। इसके बाद आईआईटी काउंसिल होती है, जिसका मुखिया मानव संसाधन विकास मंत्री होता है। तमाम आईआईटी के निदेशक और अध्यक्ष काउंसिल के सदस्य होते हैं। प्रत्येक आईआईटी का एक बोर्ड ऑफ गवर्नर (बीओजी) होता है। बीओजी के अलावा आईआईटी में सीनेट, फायनेंस कमेटी और बिल्डिंग एंड ववर्स कमेटी भी होती है।

HRD ministry to establish National academic depository

Wednesday, 3 September 2014 - 6:35am IST | Place: New Delhi | Agency: DNA

<http://www.dnaindia.com/india/report-hrd-ministry-to-establish-national-academic-depository-2015820>

The ministry of human resource [Development](#) (MHRD) will establish a national academic depository (NAD) and a law will be enacted to ensure that educational institutions post their academic awards, degrees and certificates in this central database.

"It will benefit educational institutions, students and employers. They will have online access to academic awards, eliminating the need for persons to approach educational institutions for obtaining transcripts of awards or mark statements for verification," HRD minister Smriti Irani said on Monday, who its must be recalled has twice landed in controversies over her educational qualifications or the lack thereof.

On Monday, Irani also clarified that prime minister's Narendra Modi's "Guru Utsav" day address to students will not be mandatory for students.

The MHRD had the previous week renamed Teacher's Day as Guru Utsav. This lead to allegations that there was a move to impose Hindi/Sanskrit on the country. Countering this, Irani said [Education](#) was in the

concurrent list. "It is up to the state's to decide to participate (in the PM's Teacher's Day address) or not. Children are not vote-banks," she said.

In the first 100 days of the Modi government, Smriti and MHRD have been fighting on several fronts. The decision to scrap the Four Year Undergraduate Programme (FYUP) kept admissions in Delhi University in a flux. Aspiring students took to the streets. Giving Hindi a superior status in official communications lead to protests. Dina Nath Batra's statements on rewriting curriculum caused alarm.

Irani refused to clear the air on any of these controversies, only saying that it was not right to attribute everything to her. But when Batra went to town saying that Smriti was on board, Irani did not refute him.

Smriti emphasised time and again that the Modi government was working on a new education policy which will take in the views of all stakeholders. But the MHRD went about eroding the autonomy of IITs and IIMs, pitting them against the UGC, her instrument of change.

That said, Irani and MHRD have several innovative initiatives up their sleeves...

Know Your College Portal: A one-stop portal containing information on all [Colleges](#)

Swyam Programme: Free of cost online [Courses](#) for citizens. IIT, IIM and centrally-funded universities' professors will teach. Programme to launched on September 25, Pandit Deen Dayal Upadhyaya's birth anniversary

National e-Library Platform: Online portal that will host top class content from NCERT, [CBSE](#), IITs, IIMs and central universities including research papers and thesis'

UNITE (University Network Initiative to Enhance Education): 20 classrooms in 21,000 colleges (a total of 4.20 lakh classrooms) will be made Wi-Fi enabled to enhance education network utilization, empower students

Shala Darpan: Parents of students of government and government-aided schools will get updates on their children's progress through a mobile application

Shala Utsav: States asked to identify oldest school and celebrate its foundation day

Swachh Vidyalaya: PM has made commitment to construct a toilet in every school before August 15, 2015

IITs improve soft skills of students

<http://indiatoday.intoday.in/education/story/iits-in-a-bid-to-improve-the-soft-skills-of-their-students/1/380638.html>

If they are from Indian Institutes of Technology (IIT), they are brilliant, good engineers and quick problem solvers, but what if they are not good communicators. Their failure to convey these attributes can land them to rejection. To solve such employability issues, the IITs have come up with crash courses. This will help them hone their body language, communication and writing skills.

With so much competition in the market, a faculty base and curriculum unable to keep pace with changing times, some students face problems with their soft skills.

Fixing this issue with an outside help would make these premier engineering students stand out best at their workplace.

IIT Hyderabad, which is in the middle of a pilot to assess speaking, reading and writing skills of its 1,500 engineering students, is rated as one of the best among the newer IITs in research. It has tied up with IT skilling firm Talents Sprint to conduct computerised tests evaluating the students in their BTech, MTech and PhD.

They will then undergo a 36-hour remedial coaching programme on body language, effective professional communication, listening and paraphrasing and articulating thoughts, which is mandatory for all first-year students from the next year.

IIT Kanpur, on the other hand, tied up with the British Council this year to conduct English tests focused on conversation skills and written and spoken fluency. It will also get other organisations to help students with aptitude and technical tests. The institute is in the process of setting up a Career Development Center (CDC) this year for helping students make informed decisions on job opportunities.

Moreover, IIT Guwahati too is in talks with business schools and coding platform providers for mock tests. Venturesity, a set up by IIT Kharagpur alumnus, will conduct a year-long workshop for online and on-campus courses on Python (a coding language), analytics with programming, and Android app development.

With more hands on training, capable students sitting for interviews will have brighter chances with improved body language and communication skills.

India needs to fix attitude to maths and pure science, says Fields Medal winner

MIHIKA BASU

MUMBAI, SEPTEMBER 3

DR MANJUL Bhargava, the first mathematician of Indian origin to win the Fields Medal, has noted that most Indian talent shies away from research. He says mathematics and science in India, at least in recent times, are being viewed as "tools for engineering or medicine" and "not viewed as subjects and careers" in themselves.

"This is a problem. Basic science and mathematics are very important for the long-term success of the nation," Bhargava told *The Indian Express* in an interview, part email and part over the phone.

"It's definitely not too late to rectify," he said. "It will require a change in attitude in society. Parents and teachers must encourage young people who are talented in and excited about mathematics and science to pursue their passions; that is where they will do their best work, and that will be best for the nation as a whole in the long run."

He said that while India makes a very big contribution to mathematics and science every year, "it is still not nearly as big as it should be, because much of the mathematics and science talent in India does not go into basic science research. This must be fixed."

He added, "With new IITs and IISERs opening all over India, there is more opportunity for scientific research and careers than ever before. So, in that sense, the rectification process has already started. Students wanting to go into basic scientific research will now have many wonderful jobs and research opportunities waiting for them."

Bhargava is currently R Brandon Fradd Professor of Mathematics at Princeton University, and adjunct professor at Tata Institute of Fundamental Research in Mumbai, IIT Bombay, and University of Hyderabad.

He has been involved in starting a new institute in Bangalore, International Centre for Theoretical Sciences, to be inaugurated next year. "I hope to spend even more time in India after the inauguration. A number of things must still be done to really attract scientists abroad back to India... I hope to work on these issues as I

spend more time in India," Bhargava said.

Born in Canada, Bhargava grew up mostly in the US in a "very Indian home". "We always spoke Hindi at home, ate Indian food, and discussed Indian literature at the dinner table. There are a lot of academics in my family. My grandfather was a scholar of Sanskrit and ancient Indian history, and my mother is a mathematician with deep interests in linguistics and music. They were always my two biggest influences. Because of them, I was truly inspired to pursue interests in mathematics, music, and Sanskrit."

Every three or four years, Bhargava would take about six months off from school to spend with his grandparents in their hometown Jaipur. "There, I spent time learning Hindi, Sanskrit, mathematics, tabla, sitar, and of course kite-flying, in preparation for what was my favorite holiday as a child, Makar Sankranti. My Indian heritage and the time I spent in India was a very important part of my upbringing, and played an important role in shaping my professional interests too," he said.

"I think my mathematics has taken inspiration from these subjects [music and art]. I find I think about all three of these subjects — mathematics, music, poetry — in a very similar way. It's also nice to use both sides of the brain. Mathematics has a creative side too, and for that reason I feel it's important to study the arts to keep that creative side alive when doing mathematics."

Bhargava works in the field of number theory. His work, primarily about determining when certain fundamental equations in mathematics have solutions in whole numbers, has helped introduced a new geometric method for answering such questions.

The Fields Medal is the highest honour in mathematics. "I'm of course very honoured to receive the Fields Medal," Bhargava said. "Beyond that, it is a great source of encouragement and inspiration, not just for me, but I hope also for my students, collaborators, and colleagues who work with me. I hope it may also be a source of inspiration for more Indians to take up mathematics and scientific research in general."



'WHILE INDIA makes a very big contribution to mathematics and science every year, it is still not nearly as big as it should be, because much of the mathematics and science talent in India does not go into basic science research,' says Manjul Bhargava

अगले साल से नए आइआइटी आइआइएम में दाखिले

जागरण ब्यूरो, नई दिल्ली : मोदी सरकार अपनी घोषणाओं को तुरंत लागू कर दिखाने में कोई कसर नहीं छोड़ना चाहती। बजट में जिन नए आइआइटी और आइआइएम का एलान किया गया था, उनमें दाखिला अगले सत्र से ही शुरू करने की तैयारी चल रही है। हालांकि, इनकी इमारतें और दूसरी ढांचागत सुविधाएं तैयार होने में कुछ वर्ष लग सकते हैं। वित्त मंत्री अरुण जेटली ने बजट में पांच-पांच आइआइटी और आइआइएम की घोषणा की थी।

नए आइआइटी जम्मू-कश्मीर, छत्तीसगढ़, गोवा, आंध्र प्रदेश और केरल, जबकि हिमाचल प्रदेश, पंजाब, बिहार, ओडिशा और महाराष्ट्र में नए आइआइएम खोले जाने हैं। आंध्र प्रदेश के बंटवारे के कारण एक आइआइएम इस राज्य में भी खोला जा रहा है। इस तरह ऐसे 11 नए संस्थान शुरू किए जाने हैं। वरिष्ठ सूत्र बताते हैं कि प्रतिष्ठित आइआइटी और आइआइएम संस्थानों के लिए होने वाली साझा प्रवेश परीक्षा में इस बार नए संस्थानों के दाखिले के लिए भी प्रावधान किया जा रहा है।

IIM-C to Incubate 40 Startups Over 5 yrs

Biswarup.Gooptu
@timesgroup.com

New Delhi: The Indian Institute of Management (IIM) Calcutta has launched a new startup incubator as it looks to tap into India's burgeoning start-up eco-system.

The incubator, IIM Calcutta Innovation Park (IIP), which has been registered as a Section 8 company under the new Companies Act, plans to host about 40 startups over five years. It will focus on five key sectors—healthcare, education, clean technology, lifestyle and analytics.

"The incubator will focus on entrepreneurial ventures developing product as well as delivery of services," said Ashok Banerjee, dean, new initiatives and external relations, at IIM Calcutta.

Energy solutions venture ONergy, Doctors For You and primary education-focused company Edwell will be among the first batch of incubated start-ups, while two more ventures are expected to join over the next two months.

IIP, which will provide seed funding of ₹5-₹50 lakh for an undisclosed stake in the ventures, will receive about ₹7 crore in funding from the Department of Science and Technology, which will be allocated over the same period. It also plans to raise up to ₹20 crore from its alumni.

The management institute counts notable entrepreneurs such as TutorVista founder Krishnan Ganesh, Rediff's Ajit Balakrishnan and Rocket Internet-backed Jabong's Praveen Sinha among its alumni.

IIP will also look to develop start-

up enterprises from the eastern part of the country, a region not traditionally known for emerging enterprises. "The east is still a virgin territory in terms of entrepreneur development, and where we hope to foster change," said Banerjee.

The development comes at a time when private sector incubators and accelerators have taken the lead in building the country's still-nascent startup eco-system.

"The big issue has been the over-all infrastructure. Unlike in the US,

our really great academic institutions are standalone ones. There is no central ecosystem yet," said Ajit Rangnekar dean, Indian School of Business, which runs the DLabs business incubator.

Apart from ISB, IIM Ahmedabad, IIT Madras and IIT Bombay are among the handful of education institutions to have established a strong reputation in incubating startups.

IIM Ahmedabad's Centre for Innovation, Incubation and Entrepreneurship has seeded over 100 startups, including traffic monitoring system Birds Eye Systems and healthcare delivery company Forus, with over 80% going on to raise external capital. "It's been pretty dismal. Two or three institutions have done a great job, but the others have just paid lip service," said Rajesh Sawhney, founder of GSF Accelerator, a leading start-up accelerator in the country.

Incubator will focus on five key sectors—healthcare, education, clean technology, lifestyle and analytics

Why do Indians want to study abroad?

When bright students look around India for a place to study for an advanced degree, they find few top-quality programmes

Philip G. Altbach

Post-graduate students from India are increasingly choosing to study abroad. The U.S. Council of Graduate Schools' new statistics show that offers of admission to Indian post-graduate students are up 25 per cent for 2013-14 from the previous year, compared to a 9 per cent increase for all countries. Numbers from China showed no increase compared to last year. While these statistics are only for the U.S., India's most popular destination, it is likely that other countries such as Germany, Canada and the U.K. are also seeing significant increases from India.

Reasons for departure

Why? There are, no doubt, many reasons why Indians are choosing to study abroad. Two of these factors are troubling for India's universities and for prospects for the high-tech economy. When bright students look around India for a place to study for an advanced degree, they find few top-quality programmes. In the social sciences and humanities, there are a small number of respectable departments, but absolutely none that are considered by international experts as in the top class of academic programmes. In the hard sciences, biotechnology, and related fields, the situation is more favourable with a few institutions such as the Indian Institutes of Technology, the All-India Institute of Medical Sciences, the Tata Institute of Fundamental Research and some others, despite limited acknowledgement from abroad, being internationally competitive by most measures. But the numbers of students who can be served by these schools is quite limited.

Thus, if a bright Indian wants to study for a doctorate or even a master's degree at a top department or university in most fields, he or she is forced to study overseas. Further, a degree from a top foreign university tends to be valued more in the Indian job market than a local degree—a perception based not only on snobbery but also on facts. While master's degrees can be quite costly in the U.S., the U.K., Australia, and elsewhere, doctorates are in fact quite inexpensive because of the likelihood of securing a research or teaching fellowship or assistantship that pays for most or all of the costs.

Not only are overseas programmes and departments more prestigious, they also have far better facilities, laboratories and a more favourable culture of research.



GREENER PASTURES: A degree from a top foreign university tends to be valued more in the Indian job market than a local degree, a perception based on facts too. A file photo of former German Foreign Minister Joschka Fischer with Indian students in Berlin. — PHOTO: AFP

Top faculty members are often more accessible and it is easier to become affiliated with a laboratory or institute. Academic politics exists everywhere, and Indians may suffer from occasional discrimination abroad, but overall academic conditions are likely to be better than at home.

Step toward emigration

Finally, studying abroad is often seen as the first step toward emigration. Of course, few students will admit this, but statistics show that a very large proportion of students from India — and also from China, South Korea and other Asian countries — choose to stay in the U.S. following the completion of doctoral degrees. Data from the U.S. National Science Foundation's Survey of Earned Doctorates show that 80 per cent or more of students who complete their PhDs in the U.S. from India and some other Asian countries remain in the U.S.

Since everyone who completes a doctorate is required to fill the survey, the data is quite accurate. Further, the U.S. and other host nations are making it easier for foreign doctoral holders to remain — boosting their "stay rates" — and in this

Not only are overseas programmes and departments more prestigious, they also have far better facilities and a more favourable culture of research

way contribute to the brain drain.

The reasons for deciding not to return to India are varied and not hard to discern. Better salaries and facilities abroad, easier access to research funds, working on cutting-edge topics and many others are part of the mix. And while some are lured back to India later in their careers, the numbers are small. Once established overseas, either in a university or in the research or corporate sectors, it is difficult to return.

It may be relevant to note that the rate of Chinese post-graduate students going abroad is flat after a number of years of steady increases. A likely explanation, with relevance for India, is that China has invested heavily in its top-tier universi-

ties and now has significant quality and capacity in most academic fields for post-graduate study. Chinese students are no longer obliged to go abroad for high-quality programmes, with an apparent trend toward choosing to remain at home.

Solutions

There is no short-term solution to this problem for India. The only remedy is to build up high-quality capacity in key disciplines at national institutions so that a greater number of Indian students can obtain excellent training at home. This means significant investment over time, and careful choices about where to invest since all universities cannot be top research universities.

It also means significant changes in India's academic culture to ensure that meritocracy operates at all levels. China's top universities are beginning to show up in the mid-levels of the global rankings, an indication that they are having some success. India, so far, is nowhere to be seen.

(Philip G. Altbach is research professor and director of the Center for International Higher Education at Boston College, U.S.)

Nasa seeks tweets for 'time capsule'

Washington: Nasa is inviting people around the world to submit short messages and images on social media that could be placed in a time capsule aboard a spacecraft launching to an asteroid in 2016.

Called the Origins-Spectral Interpretation-Resource Identification-Security-Regolith Explorer (OSIRIS-REx), the spacecraft will rendezvous with the asteroid Bennu in 2019, collect a sample and return the cache in a capsule to Earth in 2023 for detailed study.

The robotic mission will spend more than two years at the 1,760-foot-wide asteroid and return a minimum of 60 g of its surface ma-



MISSION TO ASTEROID BENNU

terial.

Topics for submissions by the public should be about solar system exploration in 2014 and predictions for space exploration activities in 2023. The mission team will choose 50 tweets and 50 images to be placed in the capsule.

"I look forward to the public

taking their best guess at what the next 10 years holds and then comparing their predictions with actual missions in development in 2023," said Dante Lauretta, OSIRIS-REx principal investigator at the University of Arizona, Tucson.

When the sample return capsule returns to Earth in 2023 with the asteroid material, the mission team will open the time capsule to view the messages and images.

The OSIRIS-REx mission is focused on finding answers to basic questions about the composition of the very early solar system and the source of organic materials and water that made life possible on Earth. **PTI**

'Touchable' 3D tech unveiled

Tsukuba (Japan), Sept. 3: Technology that generates touchable 3D imagery was unveiled in Japan Monday, with its developers saying users could pull and push objects that are not really there.

Know-how that could improve a gaming experience, or allow someone to physically shape objects that exist only on a computer, will soon be available to buy, said Miraisens, a high-tech firm based outside Tokyo.

"Touching is an important part of human communication but virtual reality has until now been lacking it," its chief executive Natsuo Koda told a press conference.

"This technology will give you a sense that you can touch objects in the 3D world," said Koda, a former Sony researcher on virtual reality.

It works by fooling the brain, blending the images the eye is seeing with different patterns of vibra-

tion created by a small device on the fingertip, said Norio Nakamura, the inventor of "3D-Haptics Technology" and chief technical officer at the firm.

In one demonstration of a prototype head-mounted display, the company showed how the user can feel resistance from virtual buttons that he or she is pushing.

Miraisens is a spin-off of the National Institute of Advanced Industrial

Science and Technology based in the city of Tsukuba east of Tokyo.

Billing the technology as a world first, the company says it wants to commercialise it through applications in electronics and the services industry.

The system can be built into devices in the shape of coins, sticks or pens, amongst others.

Company officials said they could foresee a number of ways of using the technology. **—AFP**

CONCRETE ACTION REQUIRED Apex court asks govt to submit state-wise plan for cleaning Ganga; offers judicial help to remove industries and other polluting units along the river

No 200-year Plan, Work Fast on Ganga: SC to Govt

Our Political Bureau

New Delhi: The Supreme Court on Wednesday pushed the government to hasten its ambitious Ganga action plan aimed at cleaning up the river, saying that it shouldn't be bogged down by red tape.

Acting on a PIL filed by the late environmentalist MC Mehta, the bench offered to pass orders that may help the government remove industries and other polluting units along the river. The bench comprised justices TS Thakur and R Banumathi.

Untreated industrial effluent is a major cause of pollution in the river, which the new government wants to clean up. Cremation rites along the banks were another cause of concern, the government told the court on Wednesday, while submitting its action plan.

About Rs, 20,000 crore has been spent so far on the clean-up programme, which was launched under the then Prime Minister Rajiv Gandhi in 1985, but with little to show on the ground. This had drawn the court's ire at the last hearing of the case. The project was reinvigorated following Prime Minister Narendra Modi's personal commitment to clean up the river venerated by millions. The government allocated a sum of Rs 2,040 crore for a new Ganga Mission project in its first budget.

Thakur, in line to be chief justice of India at some time in the future, didn't want the project to get delayed unnecessarily.

"If you want us to enforce some directions for removal of polluting industries or ask the local bodies (which are) not taking steps to prevent pollution, to act, we will certainly issue the legal process. But we don't want any long-term bureaucratic action plan say for 200 years," he said.

The court observations came after solicitor general Ranjit Kumar read out an affidavit filed by the mission director for Clean Ganga, as per the court's August 13 order explaining the contours of its plan to clean up the river. "The government accords a status of national priority to the rejuvenation of Ganga," it said. The objective was to maintain ecological flow, mitigate pollution, restore ecological sanctity and create awareness about conserving the river and ensuring people's participation in the process.

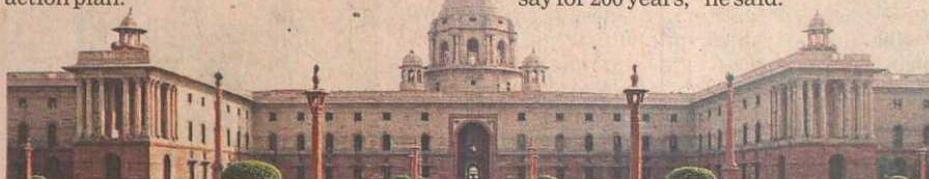
"The achievements of these objectives entail multi-dimensional, multi-institutional and multi-sectoral approach. To achieve this the consultative process involving various ministries concerned has commenced to arrive at a common strategy and action plan," it said. For now, inputs have been sought from a group of secretaries and also a consortium of IITs, it said. Then a comprehensive review will be taken in consultation with the states and an action plan drawn up, the affidavit said.

The government has also made budgetary allocations and created an integrated mission known as Namami Gange, it said.

The bench expressed its dissatisfaction with the affidavit and sought a supplementary one explaining what the government was doing urgently stage-wise to clean up a 2,500 km stretch of the river spanning several northern states.

"One feels sorry for the idols of Ganesha... immersed in the polluted river every day. It is nature which is cleaning the pollution. So long as you... have a vision, a milestone fixed for your achievements, we will hear you," Justice Thakur said. "The government must adopt a realistic approach instead of merely coming out with a comprehensive plan for 200 years."

Justice Thakur made a reference to the recent announcement about Japanese funding for the plan. "We heard it is being funded by Japan. You can get the funds from Japan or China or wherever you want. But we want you to explain how the common man is satisfied with the cleaning process," he said.



Hasten Up Project: Supreme Court

Apex court on August 13 had ordered the govt to explain its plan on cleaning Ganga

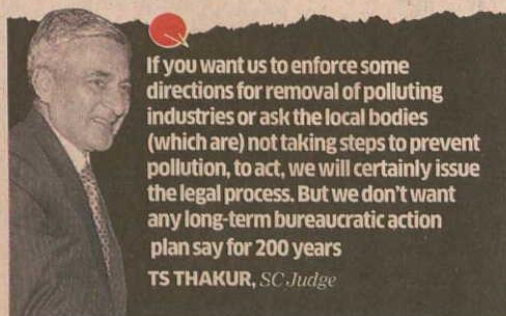
SUBMITTING ITS ACTION PLAN GOVT SAYS:

Untreated industrial effluent is a major cause of pollution in Ganga

Cremation rites along the banks were another cause of concern

Govt accords a status of national priority to the river's rejuvenation

Inputs have been sought from a group of secretaries and also a consortium of IITs



If you want us to enforce some directions for removal of polluting industries or ask the local bodies (which are) not taking steps to prevent pollution, to act, we will certainly issue the legal process. But we don't want any long-term bureaucratic action plan say for 200 years

TS THAKUR, SC Judge

₹20,000cr has been spent so far on Ganga's clean-up project launched in '85

₹2,040cr allocated for a new Ganga project in Modi govt's first budget



The court will hear arguments in the case again on September 24

Isro to test-fire orbiter engine for Mars rendezvous

Arun.Ram@timesgroup.com

Bangalore: Less than three weeks before India's first date with Mars, Isro's spacecraft authorization committee will meet on Thursday to plan a crucial test-firing of the Mars orbiter's main engine before its rendezvous with the Red Planet on September 24.

If Isro gets it right, India will be the first to succeed in a Mars mission on the first attempt. The US, Russia and the European Space Agency succeeded only after repeated attempts.

The 440N liquid engine of the Mars Orbiter Mission (MoM) had last fired on December 1 for the trans-Mars injection when mission control slingshot the spacecraft from an Earth orbit to the Martian trajectory. About 300 days later, the engine will have to fire again for a reverse effect — to slow down the spacecraft so it is captured into the Martian orbit.

"Since the engine has been idle for more than 300 days, we may have to test-fire it," Isro chairman K Radhakrishnan told **TOI**.

If the engine fails the test, scientists will have enough time to plan and use the eight smaller thrusters to inject MoM into the Martian orbit which, however, may not be the intended 372km x 80,000km orbit.

For the full report, log on to www.timesofindia.com

September 5

Economic Times ND 05/09/2014 P-6

Email 'Inventor' Ayyadurai to Seek Public Support

SHIVA AYYADURAI

In 1978, there was a 14-year-old boy working in Newark. He did in fact create the inter-office mail system and called it email. What they did before 1978 was text messaging. The facts are coming out now in 2014



Jayadevan PK & Varun Sood

Bangalore: Shiva Ayyadurai, the man in the middle of a raging controversy over his claims of being the inventor of email, doesn't want to go legal on his detractors but is looking for support from the public.

"Lawsuits take a long time. If I have to pull the trigger I will. But I have decided to go directly to the people," Ayyadurai said in an interview with ET. "When Deepak Chopra started talking of ayurveda in the US, he was attacked. His advice was to go directly to the people," he said.

Ayyadurai, an American of Indian origin who insists

that he is in fact the inventor of email, is once again right in the middle of a global controversy—not surprising given the grandiose nature of the claim. Did he, or did he not, invent electronic mail?

After hearing his talk at an event hosted by spiritual guru Deepak Chopra, Huffington Post founder Arianna Huffington decided to commission a series of articles on the history of email, Ayyadurai, 50, said.

The controversy is one of those stories on the Internet that refuse to die, in spite of having been written about and argued over many times. Some experts including Sabeeh Bhatia, co-founder of Hotmail, dismiss Ayyadurai's claims and say that email was developed by the Defence Advanced Research Projects Agency (Darpa) in the 1960s. (That US organization played a critical role in the birth of the Internet.)

Ayyadurai says email was born in a city in New Jersey not exactly known for technological breakthroughs.

"In 1978, there was a 14-year-old boy working in Newark. He did in fact create the inter-office mail system and

called it email. What they did before 1978 was text messaging. The facts are coming out now in 2014," said Ayyadurai, referring to his younger self.

Credit for the invention has been appropriated by defence contractor Raytheon, which built a brand for itself based on the claim, he said.

Raytheon declined to comment.

The controversy captured the public imagination first in 2012, when the Smithsonian Museum acquired some documents from Ayyadurai, following which articles calling him the inventor of email surfaced. His claims were promptly refuted by critics.

Computer historian Thomas Haigh was quick to point out in 2012: "Electronic mail, or email, was introduced at MIT (Massachusetts Institute of Technology) in 1965 and was widely discussed in the press during the 1970s. Tens of thousands of users were swapping messages daily by 1980."

Entrepreneur-turned-academic Vivek Wadhwa said there was no basis for such an argument. "There is no such discrimination between East Coast and West Coast. After all, Bell Labs—which was long the center of innovation—was from New Jersey. Also, IBM, DEC (Digital Equipment Corp.), and Unisys were East Coast

companies and were big players around the time he made his claims. In those days, the East Coast was the centre of innovation—not West Coast."

The Mumbai-born Ayyadurai has come a long way from New Jersey having himself gone to MIT and obtained a PhD in biological engineering from the premier school. His personal website bears the motto 'Know the truth, be the light, find your way' and bears a picture of him posing with Prime Minister Narendra Modi along his book, *The Email Revolution*.

Ayyadurai, who moved with his family to the US when he was seven, is currently running a new company that he believes will be bigger than email. He's raised \$1.5 million for Cytosolve, which aims to build a new way to model molecular reactions of a human cell on a computer, he said.

"Now we can model molecular reactions on the computer to revolutionise the entire process of multi-combination therapeutics," said Ayyadurai. "Cytosolve is a big innovation and is going to be the next billion-dollar company," he said.

Business Line, ND
05/09/2014

P-5

Hyderabad scientists develop rechargeable magnesium battery

M SOMASEKHAR

Hyderabad, September 4

A rechargeable battery with initial applications best suited to stationery devices like a UPS and inverters has been developed by the CSIR-Indian Institute of Chemical Technology (IICT), Hyderabad.

The magnesium metal battery with a natural graphite cathode can also be an efficient substitute to the commonly used lead battery. The technology for a rechargeable magnesium battery is not available for commercialisation in any part of the world, IICT said.

The novel, safe and cost-effective battery was developed by J Vatsala Rani and her team of the Flouro-Organics division of the laboratory. The eco-friendly materials used in the battery are magnesium (anode), modified natu-

ral graphite (cathode) and ionic liquid electrolyte, which are safe and easily available, she explained.

The IICT scientists are working to further increase the capacity of the battery and its shelf life, which is currently estimated to be about two to three years. The materials used in the electrode are both reusable and biodegradable.

At present, she said, most primary magnesium batteries are of the use-and-throw type. "Our battery has a capacity of 5 milliamperes per hour and can be used up to 800-900 times on recharging. Magnesium is also abundantly available and graphite is cheap," she told *BusinessLine*.

The researchers published their work in the *Journal of The Electrochemical Society*.

Mired in controversy, Irani left with little time for policy initiatives

RUHI TEWARI

NEW DELHI, SEPTEMBER 4

HUMAN Resource Development Minister Smriti Irani impressed all with her extempore address at the International Women's Conference, but has preferred to focus on issues that do not require to be fixed. Under her watch, the University Grants Commission (UGC) had clamped down on the Delhi University's Four Year Undergraduate Programme (FYUP) soon after clearing it under the previous Congress-led government, dared the IITs and silently stood by as Gujarat adopted RSS activist Dina Nath Batra's books in its schools.

Most of her moves have met with sharp criticism, with some senior Cabinet colleagues acknowledging that the education sector needs to be attended to, but definitely not by restraining innovation and chipping into the autonomy of institutions. At an Express Adda event in Mumbai on August 27, Union Finance and Defence Minister Arun Jaitley pointed out the need to liberalise the sector by allowing more autonomous universities and independent institutions.

Irani's 100 days were mired in controversy, leaving her little time to look ahead and focus on policy initiatives



aimed at opening up a sector that has largely remained untouched over two decades.

As soon as the Narendra Modi government took charge, it had to contend with the FYUP controversy because the UGC asked the Delhi University to admit students under the conventional three-year degree programmes. This U-turn happened a month after the new government took charge at the Centre, and with its backing, the UGC warned the university of strict action if the order was flouted. After resisting the UGC order, the DU finally scrapped FYUP in June end and reverted to the three-year degree format so the stalled admission process could begin.

In yet another indication of the politicisation of education under this government's watch, books authored by long-time RSS activist Dina Nath Batra, convenor of the Shiksha Bachao Andolan Samiti, were made compulsory reading in government

schools in Gujarat. The books have titles like *Indianisation of Education*, *Brilliant India* and *Vedic Mathematics*.

Fresh controversy erupted earlier this month with the UGC's communique to the IITs asking them to "align their courses and degrees with the ones recognised by the UGC". This came under widespread criticism from IITs which claimed they are autonomous institutes governed by the Institutes of Technology Act, 1961. Several IIT directors lashed out at the UGC for trying to fix a system that has done very well for the country.

The UGC issued a clarification, stating its communication had been "misconstrued" and claiming it had the "responsibility of specification of degrees". The HRD ministry's stand, meanwhile, seemed ambiguous. It just urged both to work out an "appropriate solution".

In the midst of all this, the ministry launched some new policies like the Beti Bachao, Beti Padhao Yojana to take up programmes for education of girls in a focused manner. The Padhe Bharat Badhe Bharat initiative under the SSA aims to improve language development in children by creating an interest in reading and writing with comprehension, and an interest in mathematics.

Command And Control

*Instead of politicising Teachers' Day
government must push education reforms*

Teachers' Day is meant to celebrate the contribution of educators in shaping society and nurturing young minds. It is with this intention that the birth anniversary of former President Sarvepalli Radhakrishnan is observed across schools in the country every year on September 5. However, celebrations are now sought to be mandated by diktat, as schools have been directed to make arrangements for a live telecast of Prime Minister Narendra Modi's speech, which includes getting students to stay back after school hours.

Although the HRD ministry has clarified that this is voluntary, it's been reported to have issued a written directive to states asking all schools to make arrangements for viewing the telecast and stating that it would monitor the number of schools and children viewing the speech. As things stand, the education system reeks of a bygone era of command and control where a student is seen as a passive recipient of knowledge. Instead of deregulating and depoliticising the system, current trends are in the direction of making it even more rigid.

Recently UGC attempted to browbeat IITs into following course norms laid down by it, when IITs are what they are because of their autonomy. Many four year college courses have been shut down following diktats from UGC. To foster excellence India's educational system needs to encourage diversity, choice, autonomy and the freedom to experiment. This applies to students, teachers and educational institutions. Instead of trying to re-brand Teachers' Day as the archaic-sounding 'Guru Utsav' – which fell through after southern states protested – the government should focus on reforms and push for greater autonomy to end today's patronage culture in the education sector. This will empower youth with the critical thinking and job skills they need to hold their own in a modern economy and enable India to harness its demographic dividend.

Kota's Passé: Tablets Bring Classes Within Your Grasp

Sreeradha.Basu
@timesgroup.com

Mumbai: Getting ready for the IIT entrance exam? Meet your tutor—the tablet. The electronic device is becoming an increasingly popular aid to aspirants preparing for admission tests. Those who find the price too high for lectures bundled with tablets can even pay through EMIs.

Tablet teaching is shaking up the world of traditional test prep coaching, as students shrug off the notion that there's no real alternative to classroom learning. There's been a jump in the number of people subscribing to the trend as they train themselves to write the Common Admission Test (CAT) for entry to the Indian Institutes of Management, the GMAT for MBA programmes in the US, the Joint Entrance Exam (JEE) for the IIT and the civil service exams, among others.

No wonder Samsung, traditional brick and mortar enterprises and digital education companies are all looking for a piece of the action in this fast-growing segment. "The ₹10,000-crore plus coaching *mandi* is now under threat from the tablet coaching business," says TV Mohandas Pai, chairman of Manipal Global Education. "Traditional classroom coaching will see a decline over the years. It takes up too much time, is much more expensive and teaches a lot of unnecessary stuff. Here, there is genuine learning."


Around 45-50 lakh students appear for various admission tests annually. According to industry estimates, the test preparation market in India last year was worth \$2.2 billion, including both online and regular coaching, study material and mock tests for entrance exams. It's estimated to surge to \$3 billion by year end. The online segment/virtual classrooms, including tablet teaching, is about 10% of the business and easily the fastest-growing segment, say experts.


Pai has direct experience of the acceleration in growth. A little more than four months ago, Manipal Group-funded education startup Think and Learn tied up with Samsung Electronics to provide coaching modules for CAT, GMAT, JEE and the civil service exams exclusively on the company's devices. The lessons are being provided by Think and Learn unit Byju's Classes.


Since the soft launch in May, sales through the tie-up are already at ₹15 crore compared with a total of ₹20 crore in the whole of last year, said 34-year-old Byju Raveendran, founder and CEO of Byju's Classes, which also provides coaching for Class 8-10 in math and science. More than 9,500 students have bought courses so far. Of these, more than 4,000 have been for test prep. Prices in the test prep segment start at ₹20,000 for GRE/GMAT/CAT crash courses and go up to ₹35,000.

R Khanna, working at a tech company,

Smoother, Cheaper Experience

 **Increasing use of tablets pose a threat to the ₹10,000-crore plus classroom coaching market**

 **Payment via EMIs is making it possible for those who find the price too high for lectures bundled with tablets**

 **To drive usage, new features are constantly being introduced to make for a smoother and better learning experience.**

 **Consumer electronics makers, brick and mortar stores and digital education firms are all looking for a piece of the action in this fast-growing segment**

is getting ready up to sit for the CAT this year. He's bought the Byju's Classes CAT package on an installment plan, paying a little more than ₹2,500 per month. He says tablet teaching is a boon for executives like him who can't make it for regular or even intensive weekend classes. School teacher S Roy bought her son a JEE Main and Advanced combo pack for physics on a Lenovo tablet from iProf. "He felt he needed more help in the subject and the video lectures and mock tests helped him a lot," she says.

The tie-up with Byju's, incidentally, is part of a larger initiative by Samsung Electronics, which on September 2 announced Smart Learning, an innovative education solution pegged as India's first digital education store. Launched under its Media Solutions Centre or MSC division, the store can be accessed through all Samsung tablets and is designed to offer interactive study material to students, right from those in school to those preparing for competitive exams.

The company is engaged in consumer connect programmes to promote the initiative. So far, one in every five who experience the campaign is getting converted, says Asim Warsi, Samsung India's VP for marketing, mobile and IT.

"Besides work-related and entertainment requirements, there is an important need for tablets in the area of education," says Warsi. Sanjay Purohit, founder-CEO of digital education company iProf, one of the early movers in this space, agrees. "80-85% education can be done in asynchronous mode. The rest of the time, we provide connectivity to teachers through phone, drop boxes or live video sessions," says Purohit. In January, iProf raised \$9 million (₹55 crore) in Series B funding from a consortium of investors.

At iProf, test preparation accounts for 55% of overall revenue. Over time, content has become much more interactive and last year, it had more than 1 lakh users on the test prep side. In fact, says Purohit, the company generated more business in July alone than it did in the whole of last year. Last year, the company is estimated to have done business of around ₹20-25 crore through software alone.

There are many segments of users for these tablets: price-sensitive consumers; those in remote areas; people with constraints of time and those who want to have more scope to revise. "Coaching centres only teach once. Tablets give you the opportunity to play the same thing again so a student can revisit and concentrate on his weak areas." In fact, says Purohit, iProf tablets sell in the thousands even in a coaching hub like Kota.

"The most significant growth in the test preparation market will come from the digital/electronic space. Tablets in particular have an interesting proposition," says Narayanan Ramaswamy, partner and head, education and skill development, KPMG India. It helps that prices are relatively easier on the pocket than before. The price comes down further for coaching modules on an SD card without a tablet. For instance, iProf charges ₹1,000 for a single subject for a year and ₹6,000-7,000 for all subjects for two years for the SD card. With a tablet, the latter costs about ₹18,000. Classroom coaching would cost an average of ₹35,000.

Not surprisingly, even traditional brick-and-mortar players such as Aakash Education Services are ramping up their presence in the space. While classroom coaching is still the main business, there's a high level of traction for tech products and offerings, says Aakash Chaudhry, director of Aakash Education Services. Those who availed of this option more than doubled from 600 in the first year to 1,300 in the second. This is expected to rise to 2,400-2,500 this year.



New Colombo Plan to get more Oz students to India

BS REPORTER

Mumbai, 4 September

The New Colombo Plan, which supports Australian undergraduates to study and undertake internships in the Indo-Pacific region, was on Thursday launched by Tony Abbott, Prime Minister of Australia, here.

Speaking at the launch, Prime Minister Abbott said when the Colombo Plan was initiated in 1950, the best and the brightest students had come to universities in Australia to live and earn and then return to the home country, taking back a rich experience. He added that between 1950 and 1985, about 40,000 students had visited the country to study and earn.

"In any given year, there are at least 40,000 students who study in Australian universities. But, there are few Australian students studying in India. This will change after the New Colombo Plan," he said.

A series of memoranda of understanding between Indian and Australian institutes were also signed — between Mumbai University and Deakin University for short-term programmes; Calcutta University and the University of Western Sydney; BSE Institute and the University of Western Sydney; and the Indian Institute of Technology-Madras and the Swinburne University of Technology, among others.

The New Colombo Plan involves a scholarship programme for study of up to one year and internships or mentorships, and a flexible mobility grants programme for short- and long-term courses, internships, mentorships, practicums (practical section of a

Backpacker returns

Describing India as an "emerging democratic superpower", Australian Prime Minister Tony Abbott said the country had changed "enormously" since his visit 33 years ago as a backpacker. "I can remember on my first day in Mumbai watching a bullock cart take material to a nuclear power station. Well, 33 years on, there aren't that many bullock carts left in urban India, and the power stations — the nuclear power stations — are more sophisticated than ever." Abbott, who had visited Taj Hotel during his three-month trip in 1981, described it as one of the truly magnificent hotels in the world. "Back in 1981 I spent three months as a backpacker roaming around India — this mysterious, fascinating, enthralling sub-continent, this world in one country — and I spent a lot of time in third-class compartments of railway carriages, I'd spent a lot of time in ₹2-a-night hotels and I thought, I'm going to have to treat myself. So, I came here to the Taj Hotel and I had the best lunch this hotel could provide" PTI

course of study) and research. It is open to Australian undergraduates aged 18-28.

The New Colombo Plan intends to encourage two-way flow of students in the region. The Australian government has committed \$100 million over five years to the plan.

TCS to hire 28,000 for new Hyderabad facility in five years

KV KURMANATH
Hyderabad, September 4

IT major TCS will hire 28,000 employees for its new facility at Adibhatla near the Rajiv Gandhi International Airport here.

The company opened the facility on September 1 with about 500 employees to start with. It already employs 26,000 people in Hyderabad.

TCS Chief Executive Officer and Managing Director N Chandrasekaran, who has been reappointed for five more years, met Telangana Chief Minister K Chandrasekhara Rao to brief him about its expansion plan in Hyderabad. "We have

started our operations with about 500 employees. We are going to hire 28,000 in the next three to five years over and above the 26,000 employees we have here," V Rajanna, Regional Head of TCS, told *Business Line* after their meeting with the Chief Minister.

He, however, refused to divulge the investments that went into setting up the Adibhatla facility on the outskirts of Hyderabad.

Earlier in the day, Chandrasekaran had a word of advice for the graduating students at the Jawaharlal Nehru Technological University (Hyderabad). Delivering the Convocation address, he

shared a few lessons he learned in the last 27 years. "Had I known (those lessons) when I graduated, it would have benefited me," he said. "You must aspire high. Life is complex. It is not straight forward and it always has surprises for us. Things do not go as per our expectations," he said.

Life, he said, was full of opportunities. "If we have a dream and belief and are willing to put in the effort, we can achieve anything we aim for. Develop a sense of purpose and perseverance. It is important to develop a sense of purpose. Or life can become mechanical and meaningless," he said.



Beefing up headcount N Chandrasekaran (right), CEO & MD, TCS, receiving a honorary doctorate degree from Rameshwar Rao, Vice-Chancellor of Jawaharlal Nehru Technological University, in Hyderabad on Thursday. **PH**

Brains 'talk' to each other, 8,000 km apart

In A First, Scientists Send Words 'Hola' And 'Ciao' From India To France Via Net-Linked EEG

Washington: In a groundbreaking experiment, scientists have conducted the first computer-mediated brain-to-brain communication in humans located more than 8,000 km apart, after sending the words 'hola' and 'ciao' from India to France.

The brain-to-brain transmission of information between humans was carried out without performing any invasive surgery on the test subjects, researchers said. "We wanted to find out if one could communicate directly between two people by reading out the brain activity from one person and injecting



BRAIN-TO-BRAIN COMMUNICATION

brain activity into the second person, and do so across great physical distances by leveraging existing communication pathways," said co-author Alvaro Pascual-Leone, from the Beth Israel Deaconess Medical Center (BIDMC) and Professor of Neurology at Harvard Medical School.

"One such pathway is, of course, the internet, so our question became, 'Could we develop an experiment that would bypass the talking or typing part of internet and establish direct brain-to-brain communication between subjects located far away from each other in India and

France?'" Pascual-Leone said in the study published in the journal PLOS ONE.

They used internet-linked electroencephalogram (EEG) and robot-assisted and image-guided transcranial magnetic stimulation technologies. Four healthy participants, aged 28 to 50, participated in the study.

One of the four subjects was assigned to the brain-computer interface (BCI) branch and was the sender of the words; the other three were assigned to the computer-brain interface (CBI) branch of the experiments and received the messages and had to understand them.

Using EEG, the research team first translated the greetings 'hola' and 'ciao' into binary code and then emailed the results from India to France. There a computer-brain interface transmitted the message to the receiver's brain through noninvasive brain stimulation. The subjects experienced this as phosphenes, flashes of light in their peripheral vision. The light appeared in numerical sequences that enabled the receiver to decode the information in the message, and while the subjects did not report feeling anything, they did correctly receive the greetings. **PH**

SILK STALKINGS 

PMs' Discovery of the World



Reshmi R Dasgupta

There have been quite a lot of smirks among the chatterati about Prime Minister Narendra Modi's schedule on his first major state visit — Nepal and Brics in Brazil do not count — that included feeding goldfish and 'chai pe charcha' with his Japanese counterpart. That a powwow between two leaders can — and possibly should — be anything more than a series of 'structured' discussions across long tables or on adjacent sofas has, sadly, almost been forgotten.

Time was when Indian prime ministerial and presidential trips abroad were journeys of discovery, an opportunity to understand and be understood. We needed foreign help for steel plants and IITs, dams and other temples of modern India. But visits of high dignitaries abroad could not — and were not — limited to just discussions on aid and assistance. In the long run, such distractions had their uses. There was a need to project a new India.

Imagine if 24x7 television had been around in the Nehruvian era. What would Indian audiences back then — far more cut off from the good life in the rest of the world than

their current descendants — have made of the then-PM's grand itineraries on his foreign trips? Particularly as the important trips included his daughter and grandsons, imbuing it with an air of a (royal) family outing rather than an official trip to further India's image and interests?

Of course, as the aam aadmi had no satellite TV to stay updated on such happenings and bite back if they disagreed with those jaunts. And the insiders felt that if *en famille* trips served the larger purpose of upping India's profile and getting traction in the right places, why carp? It cannot be denied that the photogenic Nehru-Gandhis on, say, boat-rides on the Rhine made a fetching picture of new India. And new versions of that tactic are definitely needed.

Official trips being more than just dreary meetings is not a bad idea at all. Take Nehru's trip to America in 1961. The banquet where Americans

first tasted specially imported Indian Alphonso mangoes off real silver thalis and the Indian delegation was feted in Hollywood by the stars created useful 'atmospherics', though there was a generation and perception gap between the ageing Indian PM and the youthful US president.

Nehru had the onerous task of putting a newly-independent country on the world map. So, any excesses and eccentricities were forgiven. But once he had set the template of the Idea of India for dissemination abroad during his long innings, successive PMs did little to change it. His daughter and grandson naturally toed that line. Maybe the other PMs weren't temperamentally inclined — or simply couldn't be bothered — to strike out on their own when it came to foreign interactions.

This PM, as we are often told, is different. So, Modi has decided to reinvent the wheel. He has decided to go

abroad and project a new idea of India, a new image — a mix of the expected and the unexpected. Nehru would not have gifted sandalwood to Nepal's premier temple or presented the Japanese PM with the Bhagavad Gita in Japanese. But he would certainly have tried his hand at a musical instrument or tweaked a little boy's ear for a cute photo-op as Modi has done this week.

Given that he is an 'outsider' and was not part of any prime ministerial jamborees as a junior minister, a genuine interest and even wonder is apparent as Modi goes abroad as PM. He is discovering new lands as much as providing an alternate idea of India. His subsequent foreign trips are also likely to see such engagement from him. Though money may be in his blood, as Modi put it, taking interactions beyond cold commerce and geopolitics will hopefully become the norm.

Besides, there is something oddly refreshing to see people in high places not so jaded or bored with their rarefied environs that they conduct official trips with zombie-like equanimity. There are many candid photos of a patrician Nehru clearly captivated by something, which would have touched a chord in ordinary Indians back then. Modi's obvious appreciation of new places and enjoyment in meeting new people may also, thus, find an echo in today's global Indian back home.



Credible Indians: One PM in Russia, another PM in Japan

reshmi.dasgupta@timesgroup.com

Alumni Gives Rs 1.5 cr Boost to IIT-M's Satellite Project

<http://www.newindianexpress.com/cities/chennai/Alumni-Gives-Rs-1.5-cr-Boost-to-IIT-Ms-Satellite-Project/2014/09/04/article2413785.ece>

CHENNAI: The IIT Madras' pet satellite project got a Rs 150 lakh boost, thanks to one of its alumni. The Rs 3 crore nano-satellite to carry out research on high energy radiation belts in the upper atmosphere, is to be completed by the end of 2015 and launched by ISRO.

The little one foot cube satellite that is being developed by a team of around 50 students of IIT-M was provided the Rs 1.50 crore funding by a company of one of its alumni, Indo-US MIM Tec. Pvt. Ltd, as a part of its Corporate Social Responsibility programme.

The satellite will study what is called the Van Allen Belts. These belts consisting of high energy particles found in the upper ionosphere could damage electronic substances due to their radiation. As such they are one of the hazards of space missions.

The students of IIT chose to take up this mission as it is a very challenging area. As of now NASA has an ongoing research to study the belt. While NASA's programme is focused on passing its system through the belt, we do it with the satellite navigating below the belt," said R David Koilpillai, professor of Electrical Engineering at IIT-M, who is involved with the project.

The project which has been going on for the past five years has generated much interest. "Some of our students who are involved with the project have completed their course and landed jobs.

But they still come during the weekends and make time whenever they can to work with it. There is a lot of excitement about the project," said the professor.

The satellite to be launched by ISRO would have a mission life of one year. During this period, the data collected by IITMSAT would be transmitted to the ground station, set up in IIT-M campus, during every pass of the satellite.

The Low Earth Orbit (LEO) Satellite project has completed a detailed review by ISRO. IITMSAT would be completely fabricated and tested by the students. Since the testing requires the presence of high energy particles, this would be done at Atomic Power Station at Kalpakkam or at the Tata Institute of Fundamental Research, Mumbai.

September 6

Asian Age ND 6/09/2014
P-5

IIT-B student dies after fall from hostel

AGE CORRESPONDENT
MUMBAI, SEPT. 5

Students on the campus of the Indian Institute of Technology, Bombay (IIT-B) are shocked at the death of fourth-year student Aniket Ambhore, who according to the police and eye witness statements slipped and died after falling from the sixth floor of a hostel on the campus on Thursday. On Friday, while the campus was abuzz with rumours that Ambhore might have committed suicide as his grades had been falling and he was in depression, the institute maintains that it was an accident and are awaiting the police investigation report. According to some students, though Ambhore fell and died at around 5.45 pm, news of the same started spreading on the campus only after the police came to the spot at around 6.30 pm. "As the area was cordoned off, there was some confusion as to who the student was and the name became clear only after some students who saw him fall identified him. They were the ones who alerted the campus security who alerted the police," said a student, requesting anonymity.

Deccan Herald ND 6/09/2014 P-10

Control mania

The University Grants Commission's (UGC) move to force the Indian Institutes of Technology (IITs) to bring their courses in conformity with the norms prescribed by it is wrong and unwarranted. A recent UGC circular told the IITs that the courses they offer should be in line with the UGC's specifications about courses in other universities. This would immediately affect the status and validity of a four-year bachelor of science course offered by some IITs. The UGC had earlier forced the Delhi University and other universities to make changes in their courses. It had also told the Indian Institute of Science, Bangalore, to discontinue a course. It created a controversy but the issue was resolved after changes were made in the course and its nomenclature. The regulatory mindset has now extended to the IITs also.

At least two IIT directors have formally protested against the UGC's move on the ground that the UGC has no power and authority to interfere in the course structures of the institutes. Members of the Anil Kakodkar committee which had made recommendations to improve the working of the IITs have also expressed the same view. The UGC was set up under the University Grants Commission Act of 1956 and the IITs under the Institutes of Technology Act of 1961. But the issue is not just one of the legal com-



"The HRD ministry has aided the UGC's control mania."

petence of the UGC to exercise control over the IITs. The IITs are centres of excellence in technical education in the country. Though their standing is not very high at the international level, it remains a fact that they are the best institutions in the country. They should have the freedom to select their students, design their courses and to award degrees. In fact, the standing they have now is the result of the autonomy they have enjoyed in these areas. They should not be equated with other universities which come under the jurisdiction of the UGC.

Unfortunately, the human resource development ministry has been supportive of the UGC's regulatory overreach and control mania. Though the UGC is also a statutory body, it has been swayed by the changing policies of governments and has been dictated to by the education bureaucracy. This is not good for the country's higher education in technical or other areas. The dispute over the UGC directive will now go to the IIT Council, which governs all IITs. It should be resolved without hurting the autonomous status of the IITs.

MHRD to take up UGC-IIT row with law ministry



UGC Chairman Ved Prakash will meet the IIT Council on Sep 22.

By Anubhuti Vishnoi in New Delhi

THE Ministry of Human Resources Development (MHRD) is all set to approach the law ministry over the UGC-IIT row regarding the applicability of UGC specifications to IIT degree programmes.

Highly-placed sources confirmed that the MHRD has decided that the UGC Act, 1956 should be referred to the law ministry — a move that could further complicate the matter. The University Grants Commission (UGC) Act and, particularly, Section 22 of the Act dealing with 'Right to confer degrees' will be referred for examination to the law ministry to assess its applicability to the IITs.

The MHRD plans to refer it to the law ministry after the matter is discussed at a meeting of the Standing Committee of the IIT Council (SCIC) on September 12,

and later by the IIT Council on September 22. UGC Chairman Ved Prakash, who is a member of the IIT Council, will also attend the Council meet to find a solution to the issue.

INDIA TODAY was the first to report that the UGC had shot off a missive to 16 IITs asking them to ensure that their degrees are aligned to those recognised by the higher education regulator.

UGC wants IITs to follow its degree specifications

Officials said the only way to resolve the stand-off is to either have the IITs agree to the UGC diktat, or to amend the IIT Act and specify that its provisions override all conflicting provisions in any other Act.

The easier way is to simply have the MHRD amend the Rules to the IIT Act, 1961 so that it is made clear that the IIT academic programmes and degrees will be determined solely by the institutes or the IIT Council.

The IITs are autonomous institutes governed by the Institutes of Technology Act, 1961 that lays down their powers, duties, framework for governance among others. They have argued that the UGC Act does not apply to them, with some of them even refusing to take cognizance of the IIT communication. Several IITs may have to restructure or rename their four-year Bachelors of Science (BS) programmes or dual degree programmes, if the UGC directive is imposed on them.

Incidentally, the MHRD has also backed the UGC on the issue saying that the IITs should try to do away with the mismatch with the UGC on degree specifications.

Times of India ND 6/09/2014 P-24

IBM now hires more in US than India amid tax, visa worries
















Sujit John &
Shilpa Phadnis | TNN

Bangalore: Over the past decade, IBM hired frenetically in India, and cut jobs in the US in an effort to be cost competitive with Indian IT services providers. Now, the Big Blue appears to be changing track, goaded perhaps by the Obama administration's social and tax pressures, and the US work visa restrictions.

However, other global IT services companies like Ireland-registered Accenture and France-based Capgemini are continuing to keep their hiring focus on India. IBM's 'Jobs at IBM' website currently lists about 6,750 jobs, of which nearly a third, 2,150, are in the US. India follows way behind at a little over 700, and China is third with about 650. More striking are the entry level positions. Of the total of 446 entry level positions open as on September 2, as many as 172, or nearly 40%, are in the US. In India, there are a mere five.

An employee of the compa-

JOBS AT IT MNCs

						
IBM	All jobs	US	India	China	Philippines	Poland
	ALL JOBS	6751	2152	729	663	416
	ENTRY LEVEL JOBS	446	172	5	6	30
						
ACCENTURE	All jobs	US	India	China	Philippines	Poland
	ALL JOBS	NA	1091	10773	255	512
	ENTRY LEVEL JOBS	NA	35	823	24	45
						
CAPGEMINI	All jobs	US	India	China	France	Poland
	ALL JOBS	4460	764	2200	0	363
	ENTRY LEVEL JOBS	NA	6	7	0	82

(Jobs available as on September 2-3 2014). Source: Company websites

ny in India said the internal job portal now shows certain IT positions with 1-2 years' experience reserved for US citizens. "I can't recollect such entry level positions earlier being reserved for US citizens," he said.

When contacted, IBM did

not directly address the matter, but issued the following statement: "Managing resources and skills is an ongoing and critical component of our business model. IBM continues to meet the changing requirements of its cli-

ents, and to pioneer new, high value segments of the IT industry. To that end, IBM is positioning itself to lead in growth areas such as cloud, analytics and cognitive computing and investing in these priority areas. Investing in and hiring talent from over 100 college campuses in India continues to be part of the strategy."

US tech entrepreneur and academic Vivek Wadhwa said he would not know if the IBM hiring trends were accurate, but said it would not surprise him. "IBM, like other US companies, is under pressure from nativists to hire more Americans. The noise is only getting louder. But it may be that IBM is trying to balance its growth and that is what is behind such a strategy," he said.

The years of frenzied hiring has resulted in India now accounting for over a third of IBM's 4.3 lakh employees (these are estimates, given that IBM has stopped disclosing its headcount by geography).

Hindu ND 6/09/2014 P-2

China honours JNU teacher for his translation works

Vijetha S.N

NEW DELHI: Jawaharlal Nehru University professor Priyadarsi Mukherji has been honoured by China this year in recognition of his long-term contribution to the translation and publication of Chinese works and cultural exchanges between the two neighbouring countries.

Prof. Mukherji, who is from the Chinese and Sinological Studies department of JNU, has translated a number of literary works from Chinese into Bengali, Hindi and English, and monographed books on Chinese culture and language over the last 25 years.

He was among the 10 award winners of the 8th Special Book Award of China, which were presented at a ceremony at the Great Hall of the People in Beijing in late August. The event was organised by the State Administration of Press, Publication, Radio, Film, and Television of the People's Republic of China. The award was conferred by the Chinese Vice-Premier, Ms. Liu Yandong.

Prof. Mukherji delivered his lecture in Chinese which was commended unequivocally by every listener in the audience for



Prof Priyadarsi Mukherji after receiving the award in Beijing.

his perfect Chinese accent.

Prof. Mukherji has to his credit many works themed around China like "Poems of Lu Xun" -- an anthology of 45 poems by Lu Xun from original Chinese into Bengali with exhaustive annotations and chronological index of the poems.

Hindu ND 6/09/2014 P-2

Deccan Herald ND 6/09/2014 P-10

JNU has 150 vacant teaching posts, says V-C

Vijetha S.N

NEW DELHI: Jawaharlal Nehru University, one of the few research universities in the country, has a formidable reputation for the quality of its faculty, be it in the Science or the Humanities. The university now has 150 vacant teaching posts which will be filled shortly by faculty that will have to meet its strict criteria.

Also, unlike the other universities, all its hirings are centralised. We have a selection committee of about 20 to 30 members comprising of external members as well as some representatives from the schools. I preside over the committee and we choose the candidate. We choose only the



“We choose only the best in the field. We usually advertise for a teaching position, the application is scrutinised by the committee and then we make the selection”

our most important criteria. Because, no matter how good a scholar you are, at the end of the day, the position is for teaching, and we need to hire a good teacher.”

He also added that promotions which have been pending for the past two or three years will be moved this year.

best in the field. We usually advertise for a teaching position, the application is scrutinised by the committee and then we make the selection,” said Vice-Chancellor S. K. Sopory.

However, academic credentials, work experience and publications aside, there is a very important criteria that needs to be met. “The person applying for the post must give a 20 minute lecture to the committee. This is

Diluting civil services exams is suicidal

Far from lowering the standards, government should take steps to train more youngsters from all walks of life.

By Vatsala Vedantam

There is an old Chinese proverb which says “Give a man a fish, and you have fed him for a day; Teach him how to fish, and you have fed him for a lifetime.” This axiom seems designed for our country with its lopsided theories of social justice in education and competition where the very systems used to cure inequalities are themselves full of disparities.

After a battle lasting months over providing a ‘level playing field’ in the competitive examinations conducted by the Union Public Service Commission (UPSC) for entry into the Indian civil services that include administration, audit and maintenance of law and order among other things, the Supreme Court has at last said enough is enough of this ridiculous drama. Students appearing for the examinations had taken to the streets to boycott the preliminary scholastic aptitude tests where a mere 20 marks were counted for a working knowledge of English at the Class X level. The tests also examined their analytical and problem solving skills – talents which are indispensable in such services. If these basic tests of competence were viewed as discriminatory and socially unjust, we are on the brink of a new order where competencies no longer count and where merit is thrown overboard. The agitation against the UPSC scholastic aptitude tests heralds a new era in India’s history. An era where students taking nationwide tests and exams can bully, bargain and boycott the same if they don’t find them palatable.

Heading towards doom

The day may not be far off when the prestigious IIMs and IITs will have to lower their standards to accommodate students who did not have the same kind of schooling as their counterparts. If that happens, other institutes which admit students through entrance tests will also have to do the same. Finally, national services which appoint candidates after verifying their aptitudes will have to do away with those tests. Where will the country be heading once all tests and examining criteria are ignored while appointing professionals in different fields?

Imagine a scenario where the armed forces select and recruit candidates for the army, navy and air force by abolishing aptitude and other eligibility

tests. Planes will crash, ships will sink and our borders will stand exposed to danger. The answer to ending socioeconomic disparities does not lie in lowering standards. By doing so, we may admit socially disadvantaged students to prestigious institutions, but they will still be at a disadvantage while seeking employment because they will have to compete with the children of parents who were high on the educational, occupational and social scale.

It will always be a no win situation for them unless the country takes steps to eradicate these disparities through long term measures like allocating more resources on primary education, appointing better teachers in schools and colleges and building quality institutions in deficit areas. You don’t train athletes by lowering the bar to make them win. Similarly, you don’t lower the bar in education or occupation to select the best.

The Civil Services Examination is a competitive examination conducted by the UPSC for nationwide recruitment in all the essential services. It is said to be one of the toughest examinations in the world with more than 5 lakh applicants seeking those positions. Apart from objective tests in core subjects and languages, it also tests the aptitude of candidates to serve in such capacities. In a multilingual country like ours, a basic (Class X) proficiency in English is a must. If these norms are diluted quoting geographical or social disparities, how will the civil services function? How will their future officials communicate, solve local problems and fulfil their obligations to society?

The very nature of their agitation during the last few weeks has exposed their unsuitability for those responsible posts which require rare skills in governance, management and discipline. Politicians may come and go. They may take populist decisions for political reasons as recent events have shown. But, civil servants need to act as the backbone of the country at all times. They have to take tough decisions, cope with emergencies and guide the affairs of state in all matters.

We need the best brains and the most competent to perform these tasks. Far from lowering its selection standards, the government should take steps to suitably train more and more youngsters from all walks of life to enter these services. Whether they suffer gender disparities or geographic disparities or socioeconomic disparities, it needs to initiate long term measures to enable them to come out of their disadvantaged state in order to compete on equal terms with others, both in academics and employment. That is what the Chinese proverb meant when it advised that we should teach a man to fish rather than offer him a fish.

HT.Com ND 06.09.2014 P-6

HOW MOTHER EARTH 'PROVIDES'

NEW VISTAS From landscape evolution to hydrogeology, a PhD in geology opens up a slew of opportunities

Dharampal Pathak

Geology is the science of the earth. The subject deals with scientific study of evolution pertaining to all spheres of our planet. The broad topics include the atmosphere, biosphere, lithosphere, cryosphere, hydrosphere through time and their mutual interaction.

The main branches of geology include geomorphology (study of the landscape evolution), geochemistry (chemistry of the earth materials), paleontology and evolution (study of vertebrate, invertebrate, microfossils), petroleum geology (study of oil and gas deposits, their exploration), coal geology (study of coal deposits, coal mining), petrology (study of rocks and their distribution through space and time).

Other branches are mineralogy (study of minerals, their formation processes), oceanography and marine geology (study of ocean processes, ocean floor, ocean currents, relation with climate, ocean resources), structural geology (study of three dimensional disposition of rocks and history of their deformation), stratigraphy (study of sequential order of rock formation, their arrangement and organisation through time and space) and glacial geology (study of glaciers, their history and future behaviors), astrogeology (study of meteorites, other extraterrestrial objects), economic geology (study of metallic and non metallic deposits of economic value).

There are more branches like engineering geology (geological studies for ensuring major engineering projects like dams, tunnels reservoirs etc.), mining geology (geological considerations in planning a mine),



COURSES AND JOBS AVAILABLE IN THE FIELD OF GEOLOGY

Second Degree	Sector	Organisation	Work Title / Description
None	Private	Engineering Services, Survey organizations, Oil Companies.	Mostly Technical after hands-on training
M.Sc. (Geology), M.Sc. (Applied Geology), M.Sc. (Earth Science)	National and International Oil Companies like Schumberger, Shell, Crain Energy, British Gas, IFP, Reliance, Essar, etc.	Geological Survey of India, Central Ground water Board, Oil and Natural Gas Corporation (ONGC), GAIL Coal India Ltd. (Govt.), BARC, NHPC, NYPC, AMD, DRDO, MMT, NMDC, ISRO (all Govt. organization)	Mainly involved in survey, mapping, exploration and management.

hydrogeology, (all about ground water, its management etc.) environmental geology (study of various geological controls on environment), planetary geology (geology of other planets of the solar system, their similarities, differences).

CAREER OPTIONS

The career options indeed open after obtaining a Master of Science in Geology / Earth Science / Applied Geology etc. offered by a

number of institutions in India. Some institutions also give degree in marine geology.

A geologist has many things to offer to the society in terms of its utility in economy of the country in addition to solving many of the key interesting scientific issues. Geology has answered a plethora of interesting questions. Answers pertaining to the origin of our mountains, formation of ice-sheets on the Antarctic and Arctic region, occurrence of mineral and petroleum coal deposits

and formation of continents have all come from geology. The subject lends knowledge in terms of the exploration of new economic resources and explains the evolution of various species. In many ways geology is the veritable link between the past and the future. Because by answering questions about the past a geologist aids future planning. After obtaining a Ph.D in geology, one can explore several avenues in higher studies both in India and abroad.

To qualify as a geologist one should have sound observational skills and be conversant with mapping techniques. The ability to use various softwares in remote sensing, and identify rocks, minerals and fossils and undertake geochemical analysis is an indispensable prerogative. All such skills are developed during the undergraduate study tenure. Post graduation entails specialisation.

INSTITUTIONS AT A GLANCE

Many of the Indian Universities offer undergraduate courses in geology and most of them are also involved in postgraduate teaching and research. Leading institutions include University of Delhi, Banaras Hindu University, (see box) among others.

TEACHERS' DAY

Modi turns spotlight on education

PM reiterates need for environment conducive to girl education; critics point out that no teacher invited to interaction

BY GYAN VARMA
gyan.v@livemint.com

NEW DELHI

In a first-of-its-kind interaction with over 12 million students across the country on Teachers' Day, Prime Minister Narendra Modi on Friday put the spotlight afresh on the state of education in the country and used the opportunity to showcase the softer side of his persona.

Since a section of the students would be eligible to vote in the next general election, analysts pointed out that implicitly Modi was turning on the charm to woo future voters. Critics were also quick to point out that though it was Teachers' Day, no teacher was invited to participate in the interaction that was telecast live.

"Prime Minister Narendra Modi has ensured that he has the first-mover advantage with the first-time voters of 2019. If we look at the age group of the students who asked him questions, they will all be voters in the next elections," said Jai Mrug, a Mumbai-based political analyst. "It is one of the best efforts for brand outreach and to improve the brand of Modi."

In the 90-minute interaction, which was initiated after a short introductory speech by the Prime Minister, Modi employed wit and personal anecdotes to disarm the students and then engage with them on a range of issues including climate change, work ethic, aspirations and skill development. A little over a fortnight after his Independence Day speech, Modi reiterated the need to create a national environment conducive to promote the education of girls, and to also provide separate toilets for girls in schools.

India has one of the largest school education systems in the world with more than 230 million students pursuing their education in over 1.3 million

schools. But despite the huge demography, poor learning quality as highlighted in several studies seems to be affecting the country's competitiveness as a knowledge hub.

Despite the Right to Education law coming into force on 1 April 2010, the situation has not improved. While nearly half the schools don't have the required toilet facilities, many schools are run by a single teacher. Overall, just elementary schools have nearly half a million vacancies.

"I am a task master. I employ the same high standards for myself. So I work hard and I expect others also to work hard. I had said in my Independence Day speech that if people work for 11 hours, I will work for 12 hours," Modi said in the interaction with students at the Manekshaw Centre in Delhi.

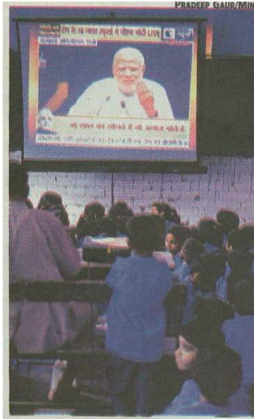
Modi also casually let it be known that he had not been able to find time to explore Delhi because of an increase in workload, and he was only moving between his office and home. While it was Modi's first conversation with students, he asked schoolchildren to further the dialogue by writing to him.

Political experts said Modi had used the opportunity of Teachers' Day for brand outreach and also to improve his own branding, which is already high after the Bharatiya Janata Party's recent victory in the Lok Sabha election.

"This is for high connectivity because Prime Minister Narendra Modi wants to establish that he is not only a great political leader, but he also enjoys a connect with young students," said Shiv Vishwanathan, a sociologist and professor at the Jindal School of Government and Public Policy at Sonapat in Haryana.

Ever since his elevation as Prime Minister, Modi has consciously worked towards an image makeover. During his recent visit to Japan, he played the flute and the drum at public events. Similarly, he charmed the people of Bhutan when he broke protocol and stopped the official cavalcade to interact with students who had lined the streets to welcome him.

"Narendra Modi wants to consolidate his position. He not only wants to be known as a repository of wisdom, but also someone who could connect with children," said Vish-



Engaging students: Modi said the interaction was also aimed at checking how many schools have infrastructure facilities.

Modi turns spotlight on education

▶ FROM PAGE 1

wanathan.

During his engagement, the Prime Minister encouraged students to contribute towards nation-building by saving electricity in their homes and ensuring cleanliness in their schools.

Modi told the students that the interaction on Teachers' Day was also aimed at checking how many schools in the country have infrastructure facilities. "This programme is for students, but I am also mapping the programme to know how many schools got my emails and how many schools have computers," he said.

Prashant K. Nanda contributed to this story.

Soil study shows life began 60m yrs earlier than thought

Kounteya.Sinha@timesgroup.com

Scientists from Kolkata have found oxygen-producing life forms were present on the earth some three billion years ago — 60 million years earlier than previously thought.

These life forms were responsible for adding oxygen (O₂) to our atmosphere, which laid the foundations for more complex life to evolve and proliferate.

Geologists from Dublin's Trinity College, along with professors Joydip Mukhopadhyay and Gautam Ghosh from the Presidency University in Kolkata, have found evidence for chemical weathering of rocks leading to soil formation that occurred in the presence of oxygen.

Using the naturally occurring uranium-lead isotope decay system, which is used for age determinations on geological time-scales, the scientists deduced these events took place at least 3.02 billion years ago.

The ancient soil (or paleosol) came from Singhbhum Craton of Odisha and was named Keonjhar Paleosol after the nearest local town.

The early earth was very different to what we see today. Earth's early atmosphere was rich in methane and carbon dioxide and had only very low levels of O₂. The widely accepted model for evolution of the atmosphere states that O₂ levels did not appreciably rise until about 2.4 billion years ago.

NOTE TO READERS

There is no Mint Markets with today's edition.

Mint is also available for ₹10 without a combo offer in Delhi-NCR and for ₹11 outside Delhi-NCR

TURN TO PAGE 2 ▶

Dreadnoughtus: 7 times bigger than T-rex

Kounteya.Sinha@timesgroup.com

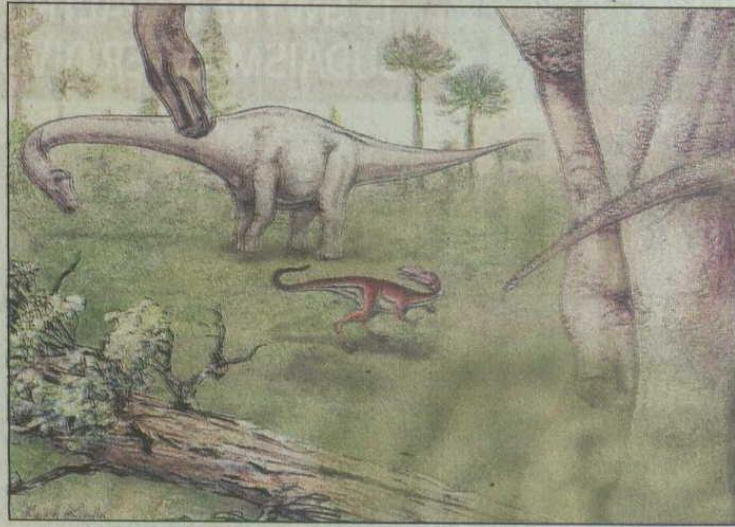
The world's first super massive dinosaur, even larger than seven Tyrannosaurus Rex put together, has been discovered.

With a 37-foot neck and weighing around 65 tonnes — the 85 feet high Dreadnoughtus Schrani has now been confirmed as the largest dinosaur to ever.

It is the biggest land animal whose body mass can be accurately calculated, say scientists. Its skeleton is exceptionally complete, with over 70% of the bones, excluding the head, represented.

Because all previously discovered super-massive dinosaurs are known only from relatively fragmentary remains, Dreadnoughtus offers an unprecedented window into the anatomy and biomechanics of the largest animals to ever.

"Dreadnoughtus Schrani was astoundingly huge," said Kenneth Lacovara, an associate professor at Drexel University's College of Arts and Sciences, who



Fossils signal Dreadnoughtus was 85 feet long, 30 feet tall & weighed 65 tonnes

made the discovery in southern Patagonia in Argentina.

"It weighed as much as a dozen African elephants or more than seven T rex. Shockingly, skeletal evidence shows that when this 65-ton specimen died, it was not yet full grown. It is by far the best example we have of

any of the most giant creatures to ever walk the planet."

According to the scientists, the new dinosaur belongs to a group of large plant eaters known as Titanosaurs.

The fossil was unearthed over four field seasons from 2005 through 2009 by Lacovara and a

team including Lucio M Ibiricu of the Centro Nacional Patagonico in Chubut, Argentina; the Carnegie Museum of Natural History's Matthew Lamanna and Jason Poole of the Academy of Natural Sciences of Drexel University.

"The quality of this specimen has allowed us to study this new species in numerous aspects giving us closer to a holistic view than is possible for most dinosaur species," the team said in a statement.

Over 100 elements of the Dreadnoughtus skeleton were found from this site, including most of the vertebrae from the 30-foot-long tail, a neck vertebra with a diameter of over a yard, scapula, numerous ribs, toes, a claw, a small section of jaw and a single tooth, and, most notably for calculating the animal's mass, nearly all the bones from both forelimbs and hindlimbs including a femur over six feet tall and a humerus.

A smaller individual with a less-complete skeleton was also unearthed at the site.

NIT teachers accuse director of favouring son-in-law

TNN | Sep 5, 2014, 04.34AM IST

<http://timesofindia.indiatimes.com/City/Chandigarh/NIT-teachers-accuse-director-of-favouring-son-in-law/articleshow/41740440.cms>

KURUKSHETRA: Using information obtained under the RTI Act, teachers of National Institute of Technology (NIT), Kurukshetra have accused its director of appointing his son-in-law, in violation of eligibility norms.

Releasing a whitepaper in this regard on Thursday, they alleged that NIT director Prof Anand Mohan had appointed his son-in-law as an assistant professor, though he did not fulfill the minimum qualification.

They also sent the whitepaper to Union HRD minister, claiming that they had sufficient evidence to prove their allegation.

When contacted, NIT public relations officer P J Philip said they had not received the copy of whitepaper and that it would be passed on to the director, who was in Delhi.

Indian Institute of Technology (IITs) and Indian Institute of Science (IISc), Bangalore join hands to deliver MOOCs

<http://indiatoday.intoday.in/education/story/indian-institute-of-technology-iits-and-indian-institute-of-science-iisc-bangalore-join-hands-to-deliver-moocs/1/381101.html>

As part of a project called National Program on Technology Enhanced Learning (NPTEL), The Indian Institutes of Technology (IITs) and the Indian Institute of Science Bangalore (IISc Bangalore) have joined hands to deliver Massive Open Online Courses (MOOCs). The project which is funded by the Ministry of Human Resource Development (MHRD) is a joint initiative of the seven IITs in Chennai, Delhi, Guwahati, Kanpur, Kharagpur, Mumbai and Roorkee with IISc Bangalore.

NPTEL is a project originated from many deliberations between IITs, Indian Institutes of Management (IIMs) and Carnegie Mellon University (CMU) during the years 1999-2003. A proposal was jointly put forward by five IITs (Bombay, Delhi, Kanpur, Kharagpur and Madras) and IISc for creating contents for 100 courses as web based supplements and 100 complete video courses, for forty hours of duration per course. The basic objective of science and engineering education in India is to devise and guide reforms that will transform India into a strong and vibrant knowledge economy. In this context, the focus areas for NPTEL project have been - Higher education, Professional education, Distance education and continuous and open learning, roughly in that order of preference.

NPTEL recently launched the NPTEL Online Certification (NOC), which is backed by Google and National Association of Software and Services Companies (NASSCOM). The portal offers two new courses at present namely, "Introduction to Programming in C", which is being conducted by IIT Kanpur officials & aims to teach the students basic programming in C with a focus on problem-solving and "Basic Electrical Circuits", which is being conducted by IIT Madras officials & focuses on analysis of electrical circuits and is meant for second year students of Electrical/Electronics/Instrumentation Engineering.

The courses are being offered free of cost. The respective IITs will provide an optional certificate for them for a fee. The certification will be on the basis of the scores acquired in online assignments and a proctored examination.