

Newspaper Clips

April 9, 2015

Mail Today ND 09/04/2015 P-20

By **Sudhanshu Mishra**
in Jaipur

THE protest by students of Indian Institute of Technology, Jodhpur (IIT-J), one of the eight new IITs established under a special central legislation, against alleged illegal termination of faculty members took a turn for the worse on Tuesday when the students locked the institute's administration block.

The strike, which began on April 1, was to demand the removal of Director Prof. CVR Murthy whom the students have held responsible for the termination of faculty members' tenure.

The students are also demanding the roll back of the recent ter-

Students demand director's ouster

mination of Dr Ganesh Bagler and transparent and fair investigation in all the past terminations during Murthy's tenure.

"In the last one year, services of 16 faculty members were either terminated or they left, while only three new teachers joined," said Professor Vijay, highlighting the paucity of faculty at IIT-J.

Rejecting the allegation against him, Murthy said the termination (of the faculty) was done by following due process by a review

Angry students create ruckus in IIT-Jodhpur



Students stage a protest outside IIT-J director professor CVR Murthy's house.

MAIL TODAY

THE CAMPUS ISSUE

IIT-JODHPUR was first announced by the Central government in July 2007 but the formal announcement came in 2008, with IIT Kanpur mentoring IIT-J. In July 2008, IIT-J's first academic session began at IIT-K campus, with 109 undergraduates. The institute was first sanctioned as an IIT for Rajasthan, and not Jodhpur in particular. It was only after considering various cities, that HRD ministry approved establishing the institute in Jodhpur.

A part of the MBM Engineering College under JNV University in Jodhpur was identified as the location for the transit campus of IIT-J. In May 2010, IIT Jodhpur classes were shifted from IIT Kanpur to the transit campus in Jodhpur. Meanwhile, construction of a permanent campus is under way.

tute, said, "A total of 38 faculty posts were lying vacant against the sanctioned strength of 90. Currently, offer letters have been issued to seven new teachers. During Murthy's tenure, four terminations, including three faculty and a member of the staff, have taken place."

In September last year, faculty

Say 16 teachers have quit or been fired

member Snehlata Jaswal and staff member Pankaj Singh had moved the Rajasthan High Court against the termination of their services. On Monday, Dr Bagler also filed a writ petition in the high court, challenging his termination only to withdraw it on Tuesday, saying that the management had assured to review its decision.

The students have also held Murthy responsible for closing down innovation and incubation centre, new B.Tech. programmes and centralisation of power.

committee of "nationally renowned experts". "Moreover, the appointments were made subject to an annual review by the panel. And it was the review committee that had decided to terminate the teachers' service and I have no role in it," he asserted.

Murthy said he has urged the students to come to the negotiation

table at least four times but nothing has happened on that front. "Every time I try to talk to them, the students remain silent. They had sent a letter to the institute's board of governors demanding minutes of the past four meetings with the students on their issues. Accordingly, I have provided them the minutes. But the protest con-

tinues. Now I am writing to their parents, requesting them to ask their wards to return to classes. Hope this would work," Murthy told MAIL TODAY.

The protesting students have also requested for the intervention of the HRD ministry.

Amardeep Sharma, PRO and assistant registrar of the insti-

Hindu ND 09.04.2015 P-2

HC disposes PIL on merging JEE

Vijetha S.N.

NEW DELHI: A public interest litigation asking that JEE (Main) and JEE (Advanced) be merged, and an independent body, above the panel of experts from the seven IITs, be appointed to decide on who should be admitted was summarily disposed of by the Delhi High Court on Wednesday. It observed that every different opinion did not mean that one had to rush to court.

The petition also accused the IITs, the country's premier engineering schools, of being non-transparent with their markings.

The counsel for the petitioner stated that the problems solved in the JEE (Advanced) had been challenged but had not been accepted in the past.

On this issue, the lawyer appearing for the Indian Government stated that once the examination had ended a panel of experts from all the seven IITs solved each ques-



Two professors can have a different opinion on the correct answer. In fact, two judges almost always have a different opinion on each answer. This does not mean you come rushing to the courts

tion and then exchanged their views. "We do not need an independent body to govern this panel of experts," he said.

The Bench of Chief Justice G. Rohini and Rajiv Endlaw said: "Two professors can have a different opinion on the correct answer. In fact, two judges almost always have a different opinion on each answer. This does not mean you come rushing to the courts."

The petitioner also said that to challenge each answer, the student had to pay

Rs. 1, 000 and this must be brought down to a nominal amount to which the court remarked that the courts may as well take a cue from this practice to contain every lawyer with an opinion that takes up its time.

"We have more than 1,50,000 students appearing for exams, we cannot encourage too many students to challenge answers on a whim," said the government.

A request to compel the IITs to provide frequent updates on the whole process of admissions were also turned down after listening to the respondent (government) on how exactly the elimination process was undertaken.

The JEE (Main) is conducted by the CBSE for admissions into under-graduate engineering programmes at NITs, IIITs, other centrally funded technical institutions, institutions funded by participating State governments, and other institutions. It is also a qualifying test for taking the JEE (Advanced).

आईआईटी की स्वायत्तता को लेकर जताई चिंता

नई दिल्ली | मदन जैड़ा

भारतीय प्रौद्योगिकी संस्थान (आईआईटी) के निदेशकों की नियुक्ति में मानव संसाधन विकास मंत्री स्मृति ईरानी के कथित दखल को लेकर जाने-माने परमाणु वैज्ञानिक डॉ. अनिल काकोडकर की नाराजगी दूर नहीं हुई है। काकोडकर ने कहा कि उन्होंने मानव मंत्रालय की नियुक्ति समिति से अलग होने का फैसला कर लिया था और वह अब भी उस पर कायम हैं। अब वह नियुक्ति प्रक्रिया का हिस्सा नहीं हैं।

यहां इंजीनियरिंग काउंसिल ऑफ इंडिया द्वारा आयोजित एक कार्यक्रम के दौरान 'हिन्दुस्तान' से विशेष बातचीत में काकोडकर ने कहा, यह सर्वमान्य तथ्य है कि आईआईटी देश के बेहतरीन इंजीनियरिंग संस्थान हैं। उनकी स्वायत्तता बरकरार रखनी चाहिए।

हालांकि सरकार इस मामले में कितनी गंभीर है यह निदेशकों की नियुक्ति के लिए अपनाई जा रही प्रक्रिया से ही साफ हो जाता है। मंत्री एक दिन में, वह भी कुछ घंटों में यदि 36 उम्मीदवारों का इंटरव्यू लेती हैं तो यह संभव नहीं है कि कोई सही उम्मीदवार चुना जा सकेगा। यह एक दिन या कुछ घंटों का काम नहीं है। इसलिए

खरी-खरी

- 36 लोगों का एक साथ इंटरव्यू लेकर निदेशक चुनना संभव नहीं
- कई चीजें बोर्ड ऑफ गवर्नर्स के भरोसे छोड़ देनी चाहिए

राजनीतिक नेतृत्व को कई चीजें बोर्ड ऑफ गवर्नर्स पर छोड़ देनी चाहिए।

काकोडकर आईआईटी मुंबई के बोर्ड ऑफ गवर्नर्स के चैयरमैन हैं। वह मानव संसाधन विकास मंत्रालय की सर्च कम सलेक्शन कमेटी में भी शामिल थे जिसमें आईआईटी पटना, रोपड़ एवं भुवनेश्वर के निदेशकों का चयन होना था। विवाद तब हुआ जब कमेटी द्वारा छोटे गए 36 उम्मीदवारों का मानव संसाधन विकास मंत्री स्मृति ईरानी ने एक ही बैठक में इंटरव्यू लिया और उन्हें खारिज कर दिया।

इससे नाराज काकोडकर ने कमेटी और बीओजी से इस्तीफा देने का फैसला किया। उन्होंने खुद को मंत्रालय की नियुक्ति प्रक्रिया से भी अलग कर लिया। उन्होंने कहा कि वह बैठकों में नहीं गए, न ही जाने के इच्छुक हैं। काकोडकर ने कहा कि वे आईआईटी मुंबई के बीओजी से भी अलग हो चुके हैं। वैसे भी उनका कार्यकाल मई में खत्म हो रहा है।

Navbharat Times ND 09/04/2015 P-16

आईआईटी कन्वोकेशन गाउन नहीं, धोती-कुर्ता

■ दिनेश चंद्र मिश्र, वाराणसी

बनारस हिंदू विश्वविद्यालय ने दीक्षांत समारोह में अंग्रेजों के जमाने से चले आ रहे रंग-बिरंगे गाउन-कैप को बाय-बाय बोलकर अब धोती-कुर्ते को पूरी तरह अपना लिया है। आईआईटी बीएचयू में पहले से ही दीक्षांत समारोह में धोती-कुर्ता और साड़ियां पहनकर छात्र-छात्राएं डिग्रियां ले रहे हैं। बुधवार को बीएचयू ऐगज्युटिव काउंसिल की मीटिंग में यह फैसला लिया गया है। अंग्रेजों के जमाने से चल रहे दीक्षांत के पारंपरिक पोशाक को त्यागकर धोती-कुर्ते के साथ सिर पर महामना मदन मोहन मालवीय स्टाइल का साफा

और बीएचयू का पताका लेकर छात्र 26 अप्रैल को दीक्षांत समारोह में डिग्री और पदक हासिल करेंगे। छात्राएं सफेद साड़ी जिसमें लाल रंग की बार्डर लगी होगी तथा सफेद ब्लाउज पहनेंगी साथ में कंधे पर उतरी भी धारण करेंगी। बीएचयू कुलपति प्रोफेसर गिरीश चंद्र त्रिपाठी की अध्यक्षता में बुधवार को हुई बैठक में तय हुआ कि दीक्षांत समारोह में स्नातक, स्नातकोत्तर व पीएचडी के छात्रों का साफे का रंग अलग-अलग होगा। बीएचयू छात्रों को साफा व उतरी खरीद मूल्य पर उपलब्ध करवायेगा। लगभग 2 घण्टे तक चली इस बैठक में राष्ट्रपति द्वारा महामना को सम्मानित किया गया भारतरत्न को उचित स्थान पर रखने पर चर्चा की गयी।

11500 को डिग्री, 327 को मेडल

बीएचयू में 26 अप्रैल को होने वाले दीक्षांत समारोह में स्नातक, स्नातकोत्तर एवं पीएचडी के 11500 छात्रों को उपाधियां देने के साथ 327 लोगों को मेडल भी दिया जायेगा। जिसमें बीएचयू मेडल, चांसलर मेडल तथा दान में दिये गये मेडल भी शामिल हैं। इस बार दीक्षांत समारोह में इसरो के पूर्व चेयरमैन प्रो० माधवन नायर मुख्य अतिथि होंगे।

गाउन का हो रहा था विरोध

बीएचयू में दीक्षांत समारोह के दौरान अंग्रेजों के जमाने से चले आ रहे गाउन के स्थान पर भारतीय पोशाक धोती-कुर्ता व साड़ियों के बारे में फैसला अब हुआ लेकिन इसका विरोध पहले से हो रहा था। दो मार्च 2013 को बीएचयू के दीक्षांत समारोह में गुंजेश गौतम झा नामक एक छात्र ने गाउन को दासता का प्रतीक बताते हुए पहनने से इंकार कर दिया था। इस छात्र ने दीक्षांत समारोह के दौरान गाउन फेंककर धोती-कुर्ता पहनकर उपाधि हासिल किया था।



Durgadatt

Indian Express ND 09/04/2015 Express Newsline P-1

CITY ANCHOR SAY THEY ARE 'GREATLY PERTURBED' OVER 'THE MANNER IN WHICH THE AUTONOMY OF THE UNIVERSITY IS BEING COMPROMISED'

Scholars take DU V-C's tussle with HRD to President

APPU ESTHOSE SURESH
NEW DELHI, APRIL 8

A group of eminent scientists and academics have taken the ongoing between the Delhi University (DU) vice chancellor and the Human Resource Development (HRD) Ministry tussle to President Pranab Mukherjee saying they are "greatly perturbed" over "the manner in which the autonomy of the university is being compromised".

This comes a fortnight after HRD issued a showcause notice to DU Vice-Chancellor Dinesh Singh over the implementation of the four-year undergraduate programme (FYUP). The notice was

served after the President gave his nod to proceed against Singh.

The April 3 letter, signed by 101 signatories, including Padmashree and Bhatnagar awardees, raised concerns that the ongoing controversy could have a long-term impact on education reforms. "There is also inherent danger wherein no administration would dare undertake new initiatives and programmes aimed at reforming the education system".

The lead signatories include former president of Indian National Science Academy Krishan Lal, former director general of Council of Scientific and Industrial Research S K Brahmachari and former DU V-C Deepak Pen-



HRD issued a showcause notice to Dinesh Singh over the FYUP issue.

ARCHIVE

tel. They have also sought time to meet Pranab, who is also the Visitor of the university.

"If a university system is discouraged from introducing new ideas and models, then the nation is likely to suffer. We are thus greatly perturbed at the turn of events in the past few months whereby questions have been raised about what have been legitimately sanctioned and approved processes and programmes," the letter said.

When contacted, Brahmachari said, "It is important to look at the positivity of every institution and DU has done very well in many innovation programmes, including FYUP at

Cluster Innovation Complex, to which I am closely associated. So I signed the letter thinking that it is important we appreciate positive developments as well."

The main charge against Singh is that FYUP was introduced in DU without clearance from the academic council, executive council, university court and the Visitor.

The HRD notice was served on Singh on March 17 and it sought a reply by March 31 on why he should not be dismissed. In his response, Singh contested the issues raised by the HRD and challenged the basis of the notice saying the President should exercise the powers as the Visitor of the university and not on advice of the

executive.

As reported by *The Indian Express*, Singh in his response contested the ministry's allegation saying, "right from December 2012 — when the initial FYUP ordinance amendment was approved by the executive council — until June 2014, never once had either the University Grants Commission or the MHRD raised any question regarding non-compliance with statutory procedures with regard to the amendment of the relevant ordinance by the university. Allegation that amendment to the ordinance was never submitted to the Visitor: This is clearly contrary to the record of communications."

HRD Ministry not satisfied with DU VC's reply on FYUP showcause?

<http://economictimes.indiatimes.com/news/politics-and-nation/hrd-ministry-not-satisfied-with-du-vcs-reply-on-fyup-showcause/articleshow/46855492.cms>

NEW DELHI: The HRD Ministry is believed to be dissatisfied with Delhi University Vice Chancellor Dinesh Singh's reply to a showcause notice on the roll-out of the controversial FYUP programme.

While the VC has strongly defended his position on the Four year Undergraduate Programme, sources said the ministry has flagged the issue of the validity of such courses, saying no "notification" was issued neither any "preparations" made for its implementation.

The FYUP was scrapped in June last year after the NDA government came to office and following pressure from UGC that it be done away.

Indicating that the VC could be held guilty on this count, the sources also dismissed his contention that the four year B.Tech programme does not require AICTE approval as it was being offered by the university itself.

The ministry in particular is "peeved" over the fact that the varsity has repeatedly ignored its directive to seek AICTE affiliation and undermined the protest of the students who are seeking the same, they said.

According to the sources, the ministry could sent its recommendations to the Visitor (the President) soon about the likely action against the VC. His tenure ends in October.

Of particular concern of the ministry is that the functioning of DU could be hampered if there is a delay in firming its stand on the VC.

While the Delhi University Act does not confer any power on the government to recall the incumbent Vice Chancellor, ministry officials said that they can invoke the General Clauses Act to get the VC removed by the appointing authority.

Singh had sent his reply to the ministry last week on the showcause.

Apart from inquiring about the ..

Singh had sent his reply to the ministry last week on the showcause.

Apart from inquiring about the legality of introducing the FYUP, the ministry had sought Singh's reply on the opening of BTech courses under the varsity without due clearance from AICTE and the diversion of funds to the tune of Rs 172 crore meant for OBC students to buy laptops.

Singh was issued a show-cause notice on March 17 after the Visitor's nod.

Teachers at Irani door for PhD relief

http://www.telegraphindia.com/1150409/jsp/nation/story_13560.jsp#.VSYyH0alhWU

- 1000 ad hoc teachers face uncertainty after SC validates retrospective UGC bar

Basant Kumar Mohanty

New Delhi, April 8: Delhi University teachers who face the sack after a Supreme Court judgment last month validated a UGC order, which retrospectively debars PhD-holders from teaching jobs if their doctorate programme wasn't verifiably rigorous enough, are knocking on the doors of Smriti Irani.

Nearly a thousand ad hoc teachers, whose services are renewed every semester, might not get a fresh term at the university after the court order last month.

The court upheld the University Grants Commission regulation on minimum qualification for appointment of teachers in colleges and universities. According to that regulation, the candidates need to have passed the National Eligibility Test or the State Level Eligibility Test (SLET) to be appointed as assistant professors. Only those who had got PhD degrees in line with the norms laid down by the UGC in 2009 would get exemption from NET and SLET.

Till 2009, all PhD-holders were eligible for teachers' jobs even if they lacked NET/SLET qualification. In view of complaints that many universities were lowering the standards of PhD programmes, the UGC in 2009 for the

first time set a uniform standard for the award of MPhil and PhD degrees.

The regulation said that existing PhD-holders would become ineligible for teaching posts unless the institutions that had awarded them the doctorates certified that they had followed the just-prescribed standards.

This regulation attracted criticism from universities across the country for its retrospective implementation. The UGC then set up an anomaly committee to review its own regulation. Following the report of the committee, the UGC last year amended the norms and decided to exempt those who had obtained their PhD degrees before 2009. But the revised regulation is still to be approved by the HRD ministry. The apex court ruling in the meantime has added to the confusion.

The apex court has said the HRD ministry and UGC are apex policy makers in these matters and their norms should be followed. Sources in the ministry said there was no clarity yet whether the revised regulation would be approved.

About 600 of the Delhi University ad hoc teachers who will be affected wrote to Union HRD minister Irani on Monday seeking relief.

Rajesh Kumar Jha, a teacher leader from the university, said the ministry must intervene and ask UGC to allow exemptions to pre-2009 PhD-holders from NET/SLET. "The UGC has given exemption from NET/SLET to PhD-holders so many times. We demand it to extend the exemption," Jha said.

Saikat Ghosh, a teacher at the university, said the UGC regulation of 2009 has provisions like course work of six months, evaluation of the thesis by external examiners, and not more than 10 students under one research guide.

Of the nearly 4,000 ad hoc teachers in Delhi University colleges, about a thousand do not have NET/SLET qualification or PhD in line with the 2009 regulation.

The regulation will affect thousands of ad hoc teachers across universities.

Ghosh said colleges may not renew their contract in the coming semester and pointed out that Daulat Ram College has already come out with a notification saying it would recruit only in line with the UGC guideline.

UGC chairman Ved Prakash would not comment. When contacted, he said: "I am in a meeting."

IISc scientists extract energy from vibrations

Hindustan Times (Delhi)

THIS DEVELOPMENT HAS A WIDE SCOPE OF APPLICATIONS AND COULD POWER SMALLS LED LIGHTS, FIRE AND SMOKE ALARMS, BIOMEDICAL DEVICES

NEW DELHI: Researchers at the Indian Institute of Science, Bangalore, have devised a technology which can efficiently extract energy from the vibrations that are almost always present around us.

This development has a wide scope of applications and could power smalls LED lights, fire and smoke alarms, biomedical devices etc.

Ever felt the vibrations from a heavy vehicle passing nearby? How about those from a powerful water pump, an AC or a fridge? These are called ambient vibrations and we are surrounded by them.

The idea to extract energy from them is not a new one. There are, for instance, watches that can charge themselves from the user's movements.

To harvest this energy a piezoelectric material is used, which generates voltage whenever it is squeezed, bent or twisted. However, this voltage is often too small to be directly useful.

Writing in the IEEE Sensors Journal, the lead author Rammohan and his team have created a novel design for harvesting energy using a piezoelectric material called Polyvinylidene fluoride (PVDF).

Their design stacks many PVDF layers one on top of the other, which effectively generates more strain and thus more power.

In fact, it is 90% more efficient than previous designs, claim the scientists.

Professor Rudra Pratap, from the Centre for Nano Science and Engineering, who led the project said, "We are currently working on lighting up LEDs with vibration energy harvested from exhaust ducts located on the terrace of our centre. We are also working on temperature and gas sensors, and fire alarms that can be run with this energy and installed in buses, trains, etc."

Paperless campus: Single card for entry, payments at IIT-B

<http://www.mumbaimirror.com/mumbai/others/Paperless-campus-Single-card-for-entry-payments-at-IIT-B/articleshow/46855881.cms>

The Indian Institute of Technology, Bombay, is moving towards becoming a paperless campus by taking many administrative functions online.

One of the keenly awaited initiatives is the introduction of a new identity card which will also serve as an on-campus payment instrument. Students will be able buy books, stationery and groceries, and even pay at the cafeteria using the card.

The new ID cards, with the 'Power to Pay' feature, have already been designed, but they will be given to students after IIT-B's biometric security systems are upgraded. The students' hostel affairs council will test the cards in the new academic session.

"The card will make it easier to manage on-campus expenses. It's safer than carrying cash all the time," said Sarthak Agrawal, general secretary of the council.

Students welcomed the initiative. "Any time we want to buy something, we won't have to run to the ATM. What's interesting is that we will have to carry only one card to gain access to different campus areas and to make payments," said Pragya Sharma, a second-year student of electrical engineering.

The hostel affairs' council also plans to introduce an online system for transparent allotment of rooms and registration of complaints. "The portal for grievances will serve as an archive and will help make campus processes transparent," Agrawal said.

Students said that the complaints redressal portal would be useful only if grievances were addressed swiftly. "It is good that students can check the status of their complaints. But the portal would be of no use if the applications keep piling," said Aishwarya Iyer, a second-year student of energy science engineering.

A new building with eateries, a central lounge and a unisex hair salon is also on the cards. "It will be constructed near hostel number 15," Agarwal said. "We are also in talks with private hospitals to set up an outpatient department in the campus hospital. Currently, only students and faculty members are provided care at the hospital. But the new facility will be open to all those who live on the campus."

IIT-B public relations officer Rashmi Uday Kumar said that the institute was aiming to become the first paperless campus among IITs. "Important functions related to administration, accounts and academics will be taken online under Enterprise Resource Planning. The whole process will be completed in two phases," Kumar said.

Alien life will be found by 2025: NASA

Press Trust of India

At a panel discussion on NASA's search for alien life and extraterrestrial worlds, NASA scientists confidently asserted that they are closer than ever before to making contact and may even be able to do so in the next 25 years or so.

John Grunsfeld, associate administrator for NASA's Science Mission Directorate, also predicted that signs of life will be found relatively soon both in our own solar system and beyond, 'Space.com' reported.

"I think we're one generation away in our solar system, wheth-



■ Jupiter's moons hold water.

er it's on an icy moon or on Mars, and one generation [away] on a planet around a nearby star,"

Grunsfeld said. According to Grunsfeld, recent discoveries suggest that the solar system and broader Milky Way galaxy teem with environments that could support life as we know it.

Oceans of liquid water, for example were only recently discovered beneath the icy shells of the Jupiter moons Europa and Ganymede, as well as Saturn's satellite Enceladus.

Researchers have found that oceans covered much of Mars and seasonal dark streaks observed on the Red Planet's surface today may be caused by yet to be found traces of salty flowing water.

ALIENS WEIGH 300+ KGS?!!

Press Trust of India

LONDON: Fergus Simpson, a scientist at the University of Barcelona, has estimated that the average weight of extraterrestrials would exceed 300 kilogrammes.

The argument relies on a mathematical model that assumes organisms on other planets obey the same laws of conservation of energy that we see here on Earth— namely, that larger animals need

more resources and expend more energy, and thus are less abundant.

There are many small ants, but few whales or elephants. Since the number of planets inhabited by relatively small animals would outnumber the worlds where large ones predominate,

We live on a planet with relatively small animals and are ourselves probably one of the smaller intelligent beings, Simpson added.

India made big gains in child edu: UN

Enrolment In Pre-Primary 58% In 2012

Manash.Gohain @timesgroup.com

New Delhi: India has made significant strides in the past 15 years, but remains far from reducing adult illiteracy.

A Unesco global education report that human resource development minister Smriti Irani would release on Thursday has revealed this.

The report said gross enrolment ratio in pre-primary education touched 58% in 2012, compared to 19% in 1999. Primary education net enrolment ratio reached 99% in 2012. India has reduced its out-of-school children by over 90%. Globally 52% of countries including India achieved universal enrolment in primary education.

India is predicted to be the only country in South and

UNESCO GLOBAL EDUCATION REPORT

India (%)	1999	2012
Gross enrolment ratio in pre-primary education	19	58
Primary education net enrolment ratio	86	99

- ▶ Since committing to global education goals in 2000, India has reduced its out-of-school children by over 90%
- ▶ 52% of countries achieved the target of universal enrolment in primary education, including India
- ▶ Gender parity will be achieved at the primary level in

West Asia to have an equal ratio of girls to boys in both primary and secondary education this year. Unesco's Global Monitoring Report (GMR) director Aaron Benavot praised India for making exemplary progress in helping children gain access to pre-primary and primary education since



69% of countries by 2015, including India

- ▶ In the goal to achieve 50% reduction in levels of adult illiteracy, 32% are very far from it. They include India
- ▶ Women continue to make up almost 2/3rd of the adult population denied the right to literacy; in India, the percentage is 68%

the global education goals were set in 2000.

"India's example clearly shows that with sufficient political will and resources the world can step up to meet the new education targets by 2030," said Benavot.

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

Women 68% of adult illiterates in country

Kounteya.Sinha @timesgroup.com

LONDON: The world is now home to 781 million illiterate adults — with 68% of illiterate adults in India being women.

India has failed to reduce its adult illiteracy rate by 50% as planned and since 2000 only managed reducing it by 26%, according to a new UNESCO global education report to be launched on April 9.

Even though there is good news with India expected to become the only country in South and West Asia in 2015 to have an equal ratio of girls to boys in both primary and secondary education, the bad news is that early marriage and adolescent pregnancies are keeping girls out of school in India. In 41 countries, 30% women aged 20 to 24 were

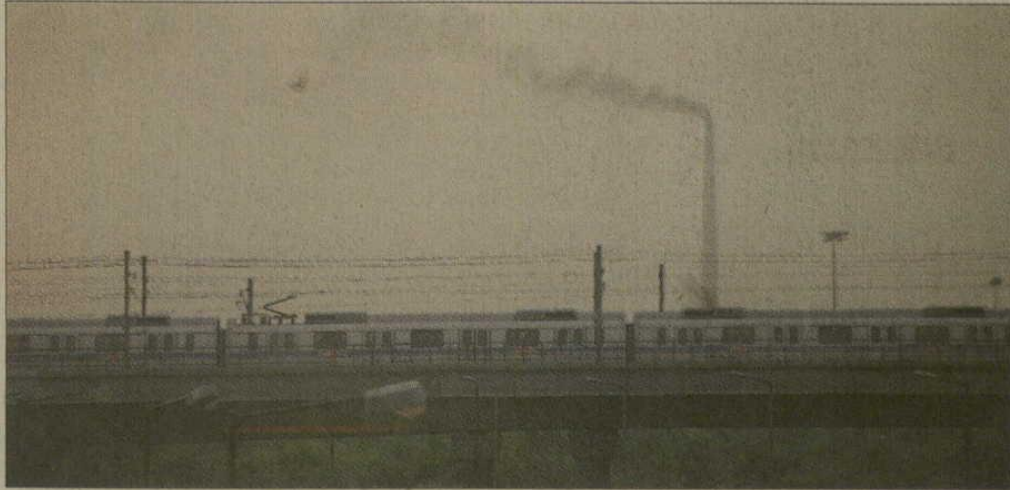
married by the age of 18. As many as 36.4 million women in developing countries aged 20 to 24 reported having given birth before age 18 and 2 million before age 15.

India has the dismal record of having the highest absolute number of child brides: about 24 million. This represents 40% of the 60 million world's child marriages. India is also home to 225 million adolescents, consisting nearly one-fifth of the nation's total population. Around 16% of these girls — aged 15-19 — have already begun child bearing and 12% have had a live birth. The report had some good news for India — rural India saw improvement in nearly all aspects of school facilities and infrastructure.

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

DEATH BY BREATH

AN EXPRESS INVESTIGATION — PART SEVEN



The Delhi Metro has taken nearly 4 lakh vehicles off the roads.

OINAM ANAND

Metro helps but

Expansion will still account for only 15% of commuter trips

PRITHA CHATTERJEE & SUMEGHA GULATI

NEW DELHI, APRIL 8

IN THE seven years that Delhi frittered away the gains of the CNG order, the one major public transport intervention has been the Metro which, as it goes to newer areas in the National Capital Region (NCR), has helped reduce pollution levels by taking nearly 4 lakh vehicles off the roads, cut annual fuel consumption by 2.76 lakh tonne and reduced pollutants by 5.8 lakh tonne a year.

Yet this has not been good enough.

Because the Delhi Metro Rail Corporation (DMRC) will account for less than 15 per cent of commuter trips in

the capital when phase III of its expansion is complete, the network covering 330 km. Issues of last-mile connectivity, of poor feeder bus services still remain and, as one survey shows, “the number of trips shifting from cars and two-wheelers to Metro is only 20-25 per cent”.

DMRC chief Mangu Singh says the responsibility of air quality cannot be “the sole responsibility of the Metro” and the DMRC has made several attempts, during construction and operation, to ensure minimal impact on environment.

“The Metro cannot do anything without support from other agencies. The city’s entire transport system

CONTINUED ON PAGE 2

DELHI CAN SHOW WAY FOR OTHER CITIES

MUMBAI: Faces surge in number of vehicles on road

KOLKATA: Becoming hotspot for construction activities

CHENNAI: Dust from outskirts a major worry

BANGALORE: Transport sector making air toxic



PAGE 6

Anaesthetic gases used in ops up Earth's temp

Their Greenhouse Effect More Potent Than CO₂: Study

© Tim Pannell/Corbis

Geneva: Anaesthetic gases used to carry out smooth surgeries are accumulating in the Earth's atmosphere, where they are contributing to climate change, a new study has warned. Over the past decade, concentrations of the anaesthetics desflurane, isoflurane and sevoflurane have been rising globally, researchers said.

Like the well-known climate warmer carbon dioxide, anaesthesia gases allow the atmosphere to store more energy from the Sun. But unlike carbon dioxide, the medical gases are extra potent in their greenhouse-gas effects.

One kilogramme of desflurane, for instance, is equivalent to 2,500 kilogrammes of carbon dioxide in terms of the amount of greenhouse warming potential, said Martin Vollmer, an atmospheric chemist at the Swiss Federal Laboratories for Materials Science and Technology in Dübendorf, Switzerland.

"On a kilogramme-per-kilogramme basis, it's so much more potent" than carbon dioxide, said Vollmer, who led the study.

In a new scientific paper published in the journal *Geophysical Research Letters*, Vollmer and his colleagues report the 2014 atmospheric concentration of desflurane as 0.30 parts per trillion (ppt).

Isoflurane, sevoflurane and ha-



HEAT IS ON: One kilogramme of desflurane, an anaesthetic, is equivalent to 2,500kg of carbon dioxide in terms of the amount of greenhouse warming potential

lothane came in at 0.097 ppt, 0.13 ppt and 0.0092 ppt, respectively. Carbon dioxide — which hit 400 parts per million in 2014 — is a billion times more abundant than the most prevalent of these anaesthetics. The team did not include the common anaesthesia nitrous oxide in the study because it has many sources other than anaesthetics.

Researchers obtained their numbers by collecting samples of air from remote sites in the Northern Hemisphere since 2000, as well as aboard the icebreaker research vessel *Araon* during an expedition in the North Pacific in 2012 and at the South Korea Ant-

arctic station King Sejong in the South Shetland Islands.

To turn these air samples into their global emissions estimates, the data were combined with a two-dimensional computer model of atmospheric transport and chemistry. Although anaesthetics are small players in overall human-generated greenhouse emissions, they are a growing matter of concern to many in the health-care industry. Anaesthesia gas abundances are growing and should not be overlooked, said Yale University School of Medicine anesthesiologist Jodi Sherman, a reviewer of the paper. ■

LEARNING CURVE

Allwin Agnel: The PaGalGuy who wants to transform education

The test preparation website, founded with ₹20,000 in 2002, plans to raise \$20 million to expand its business

By Ashna Ambre
ashna.a@livemint.com

MUMBAI

In 2002, when India was just about recovering from the dot-com burst that ended many Internet start-ups, Allwin Agnel was crazy and passionate enough to launch an online education website that he christened *PagalGuy.com*, which means crazy guy in Hindi.

Agnel founded PaGalGuy with just ₹20,000 and had promised himself that the day his company becomes big, he would change the name. But he hasn't done so because "the name has an associated charm and I just couldn't let go."

PagalGuy.com's worked well for Agnel so far, even though he did not take any money from private equity and venture capital firms. On Monday, though, the portal that is owned and operated by *Inzane Labs Pvt. Ltd* announced plans to raise \$20 million (around ₹125 crore).

"We are looking to strengthen



Tech savvy: Agnel, who does not have any formal education in technology, says to run a technology business, it is enough that one has an idea and the ability to envision its execution.

our mobile teaching solution. We will have to hire a lot of coaching experts across all verticals (business segments) for that," said Agnel. His company employs about 40 people and runs two offices. It plans to expand to two-three new cities and wants to hire 300 people by April next year.

Agnel has no formal education in technology. He graduated in 2002 from Mumbai University with a degree in commerce, but

was always thrilled about technology. "As soon as I got out of college and as my first job, I co-founded Neutral Web, a Web hosting solutions company," he said. Unfortunately, he had to close this company.

As a commerce graduate, Agnel says there weren't too many options to explore those days. With parental pressure mounting, he had to resort to doing an MBA.

"The trend during my time

and today is not very different. Even at that time, many MBA applicants were engineering students. I began looking out for information on schools and content extensively," he recalled. With no belief in brochures, which he likens to "mere advertising tools", Agnel surfed the Net to get as much information as he could on the topic.

That's when he decided to set up an online community where

people like him—who were looking for information on MBA, entrance exams and other queries—could interact.

What started out as a problem solver became a business proposition four years after it was founded. "It was in 2006 that I actually began hiring people and even took the plunge of finally doing my MBA," said Agnel. He went to Wharton business school in 2006 for an MBA in entrepreneurship and strategy.

When Agnel returned in 2008, he realized Indians had begun using Facebook. "It was Facebook (*PagalGuy.com* also has 10,200 Twitter users), its features, technology, ability to allow users to create groups is what was threatening," cites Agnel. The team got back to business and worked on its features and technology.

Until early 2013, the website provided a technology solution by which people could sign up for free on the site and gather and provide information related to MBA exams. The firm has since added verticals for banking, Graduate Record Examinations, GMAT and Union Public Service Commission entrance exams. It also provides information on coaching classes, timelines and deadlines. Various educational institutes advertise on the site, its sole revenue stream.

PagalGuy.com recently launched test preparation content for students, too. "We have designed it a bit differently. Students can take up short courses, for a day or two, on any topic that they have trouble with," said Agnel. The company does not charge users till it provides the entire course for any exam.

How does Agnel run a technology business without any formal education in technology? "One needs to be able to have the idea and visualize the execution. That's about it. I don't know how to code, don't know the nitty gritty, but I definitely understand technology," he said.

Of course, he also has Sandeep Kalidindi, a computer science graduate from the Massachusetts Institute of Technology, who heads technology at *PagalGuy.com* and has been with him since 2007.

The Indian online education market is anticipated to reach \$1.28 billion by 2017-18, according to a report by Ken Research, a market research firm.

The market in India, which can be broadly divided into test preparation, tutoring and online courses, is forecast to grow between 60-100% each year as the industry is in its initial phase of growth, according to Prashant Mehta, partner at Lightbox Ventures, a venture capital firm.

It's not surprising that online education start-ups have been attracting the attention of investors. *Rankjunction.com*, *Toppr.com* and *Embibe.com* have raised, or are in the process of raising, funds from angel investors and venture capital firms. *Embibe.com* acquired 100Marks, a competitor, in February.

Agnel will have to deal with this competition when he's thinking about growing his monthly user base of 700,000 people and business expansion.

Meanwhile, he enjoys riding his bike and listening to music. He also has a private pilot's licence. "I've flown aircraft and have also jumped off them."

Metro

and its impact on air pollution cannot depend only on the Metro. What you see is in spite of the Metro. Imagine the situation had the Metro not been there", Singh told *The Indian Express* (Interview on page X).

An assessment of the DMRC by the Central Road Research Institute (CRRI) found that Metro phases I and II, completed in 2006 and 2010 respectively, took off the roads 16,895 vehicles in 2007; 1,17,249 vehicles in 2011; and 3,90,971 in 2014.

The corresponding annual reduction in fuel consumption was 24,691 tonne, 1,06,493 tonne and 2,76,000 tonne, saving time per trip by 31 minutes, 28 minutes and 32 minutes respectively. The annual reduction in pollutants was 31,520 tonne, 1,79,613 tonne and 5,77,148 tonne respectively.

In 2014 alone, the cost of time saved was assessed at Rs 4107 crore, cost of fuel savings Rs 1,972 crore, savings in cost and operation of vehicles Rs 2,617 crore, and cost of pollution saved Rs 489 crore.

"Since 2007, we have gained 2,20,591 CERs (certified emission reductions) of carbon credits, which means an equivalent amount of carbon dioxide has been saved from being emitted in the atmosphere. From 2004-07, taking our gains during construction into account, 3,10,595 tonne of CO₂ (carbon dioxide) emissions have been avoided based on our regenerative braking system alone. All these have been vetted by the highest international agency, the UNFCCC (United Nations Framework Convention on Climate Change). Our phase II corridors will, on an average, reduce 5,29,043 tonne of CO₂ annually," Mangu Singh said.

A Delhi School of Economics (DSE) working paper, by Deepti Goel and Sonam Gupta, examined the impact of Metro line extensions on pollution around a major traffic intersection between 2004 and 2006. The impact on particulate matter levels could not be calculated due to 47 per cent missing observations in Central Pollution Control Board (CPCB) data on hourly PM 2.5 levels but a 34 per cent reduction in localized carbon monoxide levels could be attributed to the Metro extensions.

Goel, assistant professor in economics at DSE, said: "We looked at three major vehicular pollutants — NO₂, CO and PM 2.5 around ITO. Specifically, looking at CPCB data between 2004-2006, if it hadn't been for the extension of the Yellow line from Kashmere Gate to Central Secretariat, the CO levels would have been 34 per cent higher at ITO than what they were. Due to several segments of missing data, we could not arrive at a definitive conclusion on impact on particulates."

"While the Metro appears to be doing a good job in Delhi, its viability in smaller cities needs scrutiny as Metro systems need a lot of ridership in order to recoup high capital costs," Goel said.

Experts on transport policy, including committees appointed by the government, have questioned the environmental sustainability and feasibility of the DMRC and similar Metro projects.

In June 2014, the National Transport Development Policy Committee (NTDPC) report on energy and environment compared Metro phase I, which cost Rs 191 billion and covered 65 km, to the Golden Quadrilateral highway that connects four cities with four-

lane highways and cost approximately Rs 300 billion for 5,846 km.

"The Delhi Metro, including its three phases, will provide for less than 15 per cent of commuter trips in the city. The average Metro trip being longer than other trips will, however, account for a greater proportion of urban travel in terms of passenger km," the NTDPC report noted.

A 1995 report by RITES, which provides consultancy on urban transport, the DMRC initially projected a daily ridership of 3.1 million passengers by 2005.

The NTDPC quoted three different studies — the RITES report, an analysis of the Kolkata Metro by Y P Singh, former chief engineer of the Mass Rapid Transit System of the Northern Railway, and a 2012 analysis in the *Journal of Public Transportation* by S K Singh, professor of economics at IIM Lucknow — and stated: "The original feasibility study for developing a Metro system for Delhi justified its economic feasibility by projecting a daily ridership of 3.1 million passengers by 2005. This was later reduced to 2.18 million passengers on the first three corridors (65.8 km when completed in December 2005 as stated by the DMRC CMD, and then in 2005 further reduced to 1.5 million a day. The system was actually operating at around 0.6 million passengers per day at the end of 2007, (and in 2012, on a festive day, it recorded a historic peak of 2.2 million passengers on both the phases together close to 200 km length) less than 20 per cent of projected capacity."

Geetam Tiwari, from the Transport Research and Injury Prevention Programme (TRIPP) at IIT Delhi, said: "The Metro still accounts for just 4 per cent of total trips in Delhi. TRIPP surveys show the number of trips shifting from cars and two-wheelers to metro is only 20-25 percent."

According to Tiwari's analysis, 40 per cent trips made in the city are less than 5 km. And 70 per cent trips are less than 10 km. Metro is mainly used for longer trips, with an average trip length of 16 km. "How many people in the city make trips which are over 16 km? What the Metro has done is encourage these long trips, while not providing real benefits to shorter, intra-city transport needs," Tiwari said.

Experts say environmental gains from the Metro are being negated by the failure to meet footfall targets and a "skewed presentation of ridership".

Professor Dinesh Mohan of IIT Delhi, who was a member of the NTDPC, said: "Before the launch of the Metro, DMRC had claimed the ridership would be 30 lakh people. Now, it has built over 200 km, and still has not managed to reach 30 lakh." He said crowding in trains needs to be assessed with the interval and carriages in every train.

"The ridership numbers are skewed. Claims of overcrowding are justified only when the Metro is running to its capacity — trains every two minutes or less with 8-12 carriages per train. If trains are running at five-minute intervals with six carriages, it is already running 1/4th its capacity. During rush hours, trains may appear overcrowded, but theoretically the Metro is running to 20 per cent of its overall capacity. So, you are not connecting as many people to the

Metro from vehicular transport as the ridership figures seem to suggest."

The Metro design, Mohan said, has been done on the lines of countries in Europe and North America but is not suited to Delhi which has affected its benefits.

"All cities in the world cannot be the same. These mature global cities which became commercial and technological hubs by 1990s are so built that people can come to work in the city centre. Commercial hubs were fed to the centre, so their rail systems were designed accordingly. In Delhi, the radial system of design which the DMRC followed has not converted many vehicle-bound people because very few come to the centre of the city to work. Most people travel to NCR areas like Gurgaon or Noida which have emerged as commercial centres and have headquarters of multinational companies. Travel to the city centre in Delhi is only restricted to reasons like tourism," he said.

But E Sreedharan, former DMRC chief who introduced Delhi to the Metro, disagrees. "We never adopted the model of any other nation. While building Delhi Metro, our main focus was to build it along corridors where they were needed the most. And the crowded trains justify that our choices were correct. There is so much traffic everyday."

Asked whether DMRC did not foresee the NCR growing into a commercial hub, Sreedharan said: "Phase I brought Metro to areas where it was most urgently needed. The system has to grow in phases. Now, we have reached phase III where a lot of expansion is in NCR. Then there will be phase IV and so forth."

The NTDPC report also pointed out that Metro rail had significant cost of infrastructure construction and maintenance due to energy consumed and carbon dioxide emitted. Comparing Lifetime Cost Analysis (LCA) of different modes of transport, the committee stated that Metro projects have the highest construction costs, which add to the environmental burden. It said "concepts and analytical skills" for conducting LCA "do not exist in ministries, government agencies and in most cities".

Partha Mukhopadhyay of the Centre for Policy Research (CPR) said: "The carbon footprint of Metro is higher than buses because these run on electricity, which is generated by coal. So even though Delhi Metro may not cause pollution where it is running, pollution will be generated at the location where electricity is being generated for its purpose. So the costs to environment are just transferred from one location to the next."

Experts say as the Metro expands into the NCR, attempts should be made to provide last-mile connectivity and make short travels more comfortable to ensure more people take the Metro.

"Road structures should be improved to make the Metro more accessible — if a 2-km wide road narrows after 5 km, obviously there will be ballooning of traffic, making access to stations more difficult. Make stations more accessible with better road design and last-mile connectivity," Dinesh Mohan said.

Deepti Goel said: "In a country with surplus manpower, we should perhaps look at cycle rickshaws as an environmentally sustainable method of providing the last-mile connectivity to Metro stations."