

# Newspaper Clips

**August 24, 2011**

Economic Times Kolkata 23.08.2011 P-19

## PM Asks Scientists to Develop Soft Skills

**RAKHI MAZUMDAR**  
KHARAGPUR

The Prime Minister has called for a massive effort from the country's scientific community to develop soft skills in managerial and technical software to power the next generation of growth and development.

Speaking at the 57th annual convocation of the Indian Institute of Technology, Kharagpur, here on Monday, Manmohan Singh said: "While the country has experienced manufacturing, agriculture and information technology revolution, none of these can individually power India's diverse growth needs but need to develop in tandem. Our scientific and entrepreneurial energies now have to be channelised to usher

in a Second Green Revolution and find pathways to make green growth a profitable business enterprise."

The PM also said the government will soon take up the recommendations of the Anil Kakodkar Committee on functioning of the IIT system which provides the country with a pool of technical manpower. "The committee has made a number of important suggestions and has noted, among others, that the number of PhDs coming out of IITs is far less compared to technology institutes in the US and China. It is important that the IITs take up the challenge of creating an advanced research-based innovation eco-system with the involvement of industry and national technology-related programmes," he added.

Earlier, the director of the institute, Damodar Acharya, announced the institute's move to set up a science park at a cost of ₹350 crore to foster research with help of industry on 10 acres at Rajarhat. Another \$300 million will be spent on a brand new Centre for Advanced Research proposed to come up in Kolkata which will focus on cutting edge work in two key areas — bio-informatics and energy science.

Mani Bhaumik, an IIT KGP alumnus, who has distinguished himself in the area of laser technology, has decided to donate \$150 million and 15 acre for setting up the advanced research institute.

At the convocation, the institute conferred honorary degrees of doctor of science on five eminent personalities from the world of in-

dustry and science. This included Sunil Mittal, chairman of Bharti Enterprises, Brijmohan Lall Munjal, chairman of Hero group, R Chidambaram for his work on India's nuclear program and agriculture scientist, MS Swaminathan. On its diamond jubilee year this year, the institute conferred degrees to 1,966 graduates and another 245 PhDs. The Union Finance Minister Pranab Mukherjee, West Bengal Governor MK Narayanan and Shiv Nadar, chairman of IIT KGP's board of governors, also attended the event. This year, the ongoing popular discontent over corruption and the Lokpal Bill also managed to cast a bit of its shadow on the convocation with one student of the institute going on a fast against corruption.

Hindustan Times Kolkata 23.08.11 P-4

## City will shine again on education map, says PM

HT Correspondent  
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**KOLKATA** Kolkata, once considered a great centre of learning and creativity, has lost its glory over several decades, Prime Minister Manmohan Singh said on Monday.

Singh, however, compared Kolkata as a rising sun and showed a glimmer of hope saying: "I sincerely believe a new sun is rising on the east and Kolkata can once again regain its glory as India's window to Asia."

Although the Prime Minister stopped short from blaming any party for the decline, it was but obvious that his target was the Left Front, which had been in power in Bengal for more than three decades.

A few months ago when Singh



■ Prime Minister Manmohan Singh, Governor MK Narayanan and Finance minister Pranab Mukherjee at the IIT convocation in Kharagpur. ASHOK NATH DEVI/HT PHOTO

came to Kolkata to campaign for the Assembly elections he had directly blamed the Left Front for the decline of Bengal

and Kolkata.

He said one of the greatest Indians who rediscovered India's Asian identity and Asia's link

with India was Rabindranath Tagore. "His travels to the east helped India reconnect with its civilisational neighbourhood,"

**Rabindranath Tagore's travels to the east helped India reconnect with its civilisational neighbourhood**

MANMOHAN SINGH  
Prime Minister

he said.

"The time has come to rebuild on this great civilisational heritage and to pool our wisdom, knowledge and experience to revitalise West Bengal's economy, polity and society to scale new heights of human endeavour and achievement in the service of people," Singh said.

He was speaking at the golden jubilee celebrations of IIM Calcutta. The prime minister

also urged IIM students to get involved in looking for solutions to the challenges that come in the country's way in achieving 9% growth rate in the 12th five-year plan starting on April 2012.

He said a 'business-as-usual' approach will not work if the Indian economy is to achieve its long-term 9% annual growth target, which is "very ambitious" in the backdrop of global uncertainties and the economic slowdown.

He said India has been transformed into one of the fastest growing emerging markets in the world.

"If we can continue to grow at this rate, we are well-positioned to be the country with the third-largest GDP in the world by 2025," the Prime Minister said.

Times of India Kolkata 23.08.2011 P-2

# First batch gets front row at IIT bash

Prithvijit Mitra | TNN

**Kharagpur:** IIT Kharagpur did not miss its date with history, finally. Four members of the first IIT batch, who were initially refused invitation on the ground that it wasn't an alumni meet and that they

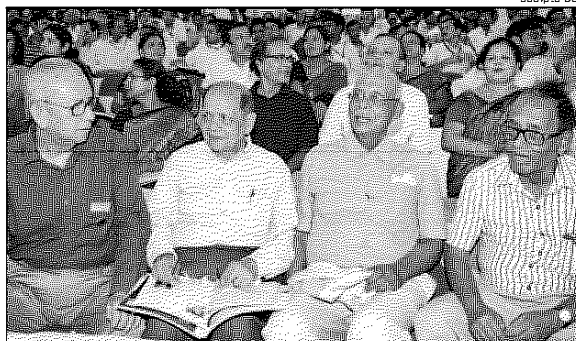
## FOND RECALL

were "short of space", rubbed shoulders with the guests and other alumni at the diamond jubilee celebrations of the oldest IIT.

Four of the 12 surviving members of the first batch, who had walked into the IIT campus as its first students in 1951, returned to the campus

on Monday. "We are happy to be a part of the celebrations. Even though late, the IIT has invited us for the meet. We attended the convocation and then the lunch. We also visited the Patel Hall hostel where we spent those four years from 1951 to 1955," said Mihir Biswas, one of the first batch students, who visited the campus along with batchmates Jnanomoy Majumdar, BC Mondol and Subba Rao.

"We couldn't have asked for more. Even after 60 years, all of us remain deeply attached to the campus. We are the ones who witnessed the birth of the IIT movement. So, it left us heartbroken when the invitation was initially refused,"



**THE PIONEERS:** Alumni of the first batch at IIT-Kgp on Monday

said Majumdar:

TOI had reported how the first batch students felt dejected and humiliated by the

institute which didn't even respond to their offer of help in the preparations for diamond jubilee celebrations.

Last week, they received a call from the institute's alumni association. They were asked to be present at the convocation and attend the lunch. "We had requested them to arrange for our accommodation, but were told the guest houses were full. It is understandable and we have no issues with that," said Biswas.

The septuagenarians reached the campus by car at 10am on Monday. They headed straight for the Patel Hall and re-lived old memories. After a quick lunch, they headed for Tagore Open Air Theatre where Prime Minister Manmohan Singh inaugurated the diamond jubilee celebrations.

Mint ND 24/08/2011 P7

# IIM-A incubator to start ₹100 crore green fund

BY DEEPTI CHAUDHARY  
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BANGALORE

The Indian Institute of Management, Ahmedabad's (IIM-A) incubation centre is starting a ₹100 crore fund that will back start-ups developing technology related to sustainable energy.

The Centre for Innovation Incubation and Entrepreneurship (CIIE) is collaborating with the ministry of new and renewable energy, the Union government's investment fund Technology Development Board (TDB) and the UK's BP Plc for the Indian

Fund for Sustainable Energy (INFUSE).

"While we incubate start-ups in (the) renewable energy space as well, we can't really help them graduate to the next level as their capital requirements are high," Kunal Upadhyay, chief executive, CIIE, said by phone. "Through this initiative, we will be able to support them further."

INFUSE, a rare private-public-academia partnership, will incubate, build and support sustainable energy start-ups financially and through mentoring. The fund will be announced at an event at

IIM-A on Thursday.

Upadhyay said the fund will back start-ups from across the country, including firms not incubated at CIIE. The IIM-A incubation cell, which has a clean-tech portfolio of around 10 firms, will act as an investment adviser to the fund, seeking out emerging ideas and technologies for the start-ups it invests in.

INFUSE will hand-hold entrepreneurs through pilot studies and help them scale up their technologies with equity investments of up to ₹6 crore.

The fund has raised commitments for about ₹50 crore so far from the renewable energy min-

istry and TDB, and expects to raise the remaining corpus in two-months months.

"We will not have a spray-and-pray approach. The plan is to fund good ideas and take them forward," said Upadhyay.

Shradha Sharma, founder of YourStory.in, which tracks start-ups and has the largest database of fledgling firms in the country, said India suffers a noticeable scarcity of entrepreneurs in the renewable energy space.

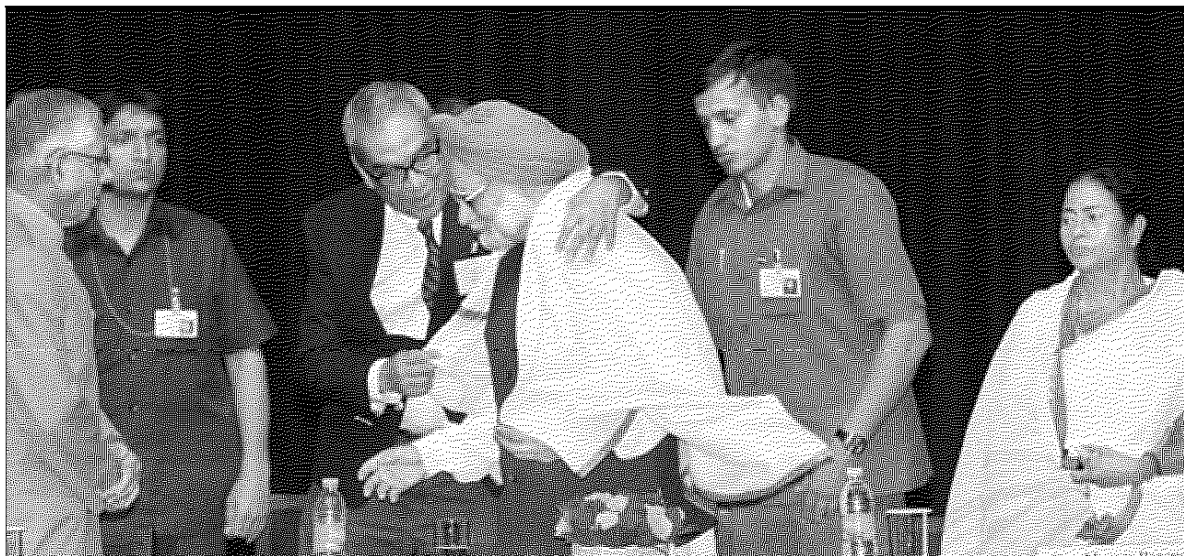
Few entrepreneurs venture into this area because of a lack of a support system such as those available for the e-commerce, mobile value-added services

and information technology sectors, she said.

"If they (INFUSE) do very-early-stage investments, it's going to be a huge step for the sector as investors tend to shy away from these firms because they are often pre-revenue and have long gestation periods," Sharma said.

India has substantially strengthened its renewable energy plans in the past few years. The government now aims to add 17 gigawatts of renewable energy generation capacity by 2017, which will require up to \$33.8 billion (nearly ₹1.55 trillion) in new investments.

Hindustan Times Kolkata 23.08.11 P-1



■ Prime Minister Manmohan Singh, governor MK Narayanan and chief minister Mamata Banerjee at a function celebrating the Golden Jubilee of the Indian Institute of Management, Calcutta, on Monday.

SUBHANKAR CHAKRABORTY / HT PHOTO

## MANMOHAN FEELS HAZARE EFFECT

(CONTINUED FROM PAGE 1)

Instead, he said, "There are differences. All individuals concerned should convey their concerns to their representatives in Parliament and to the standing committee. We're open to reasoned debate."

The Centre has already introduced the Jan Lokpal Bill in Parliament and it is now before the standing committee. Hazare and his supporters, on the other hand, are demanding that their version of the bill be passed by end-August.

Singh also flagged the funding of political parties as a major source of concern. "The funding of elections and of political parties happens to be yet another area which calls for reforms to reduce the scope of generation of black money," he said. The prime minister told his audience that this would take time and effort, but assured them that it could be done.

"There are some who argue that corruption is a consequence of economic liberation and reforms. This, of course, is completely mistaken. Many of the areas which have actually seen systemic reforms have also seen the disappearance of corruption. Industrial licensing, import licensing and rationing of foreign exchange are good examples," he said.

Singh said, "Many countries have a law to govern government procurement. We propose to introduce legislation along these lines." He added, "Our economic growth has slowed down."

# PM feels Hazare heat at IIT-Kgp

HT Correspondent

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**KOLKATA:** The creation of the Jan Lokpal Bill will help, but won't, in itself, resolve the problem of corruption unless supported by judicial reforms and a comprehensive restructuring of the government system, Prime Minister Manmohan Singh said in Kolkata on Monday.

The reverberations of Anna Hazare's fast were felt during

the prime minister's visit, when an IIT-Kharagpur post-graduate student of structural engineering refused to accept his degree from Singh. "I can take the degree later. Today, I'm fasting in support of Hazare," said Shashi Shekhar Singh, the student in question.

The prime minister spent the second, and final, day of his trip to West Bengal visiting IIM-C and IIT-Kharagpur. While at the IIT, 40-50 students staged

a rally outside the campus gates in support of Hazare. Singh, himself, brought up the topic of the lokpal bill at a programme at the IIM in the morning.

"The bill needs to be supported by improvements in the pace and quality of judicial processes. Speedy trials and timely judgments will do a great deal to discourage corruption," Singh said from the podium of the Golden Jubilee celebrations of the IIM.

"We need to revamp the exist-

ing government procedures thoroughly to reduce discretion and make the basis of decision-making as transparent as possible," he added.

The prime minister also said he had asked a group of ministers (GoM) to look into the issue.

At a time when the entire country is being swept by the wave triggered by Anna Hazare, the PM chose not to mention the anti-graft crusader at all.

CONTINUED ON P4

Times of India ND 24/08/2011

Delhi Times P-10



Students at IIT Kharagpur assemble at a pro-Anna campaign activity

# PM's afraid of the masses

IIT Kharagpur students say their professors do support them, but unofficially

Divya Pal

**R**itesh Singh, a third-year Computer Science student at IIT-Kharagpur, was one of the many students who boycotted the institute's convocation ceremony on Monday. According to Ritesh, who also works as the coordinator for India Against Corruption, this was just a way to tell India's PM that the students support Anna Hazare. "Students refused to attend the convocation ceremony because we believe that before India's PM honours us, he should honour himself by listening to the masses. The number of people who have resolved to go on a fast to support Anna is staggering. But the PM doesn't seem to care. Nor has he given any statement on the Lokpal

Bill. We are disappointed with this."

But didn't the students feel that speaking to the PM about their concerns could have been a better option than boycotting the event? "Unfortunately, he doesn't hold Q&A sessions no matter where he goes. I don't know if he is afraid of the masses. But he simply doesn't interact with the people. And we couldn't have shouted while he was addressing the gathering." Going by the information Ritesh got, the institute's authorities were also requested not to hold a Q&A session with the PM. "This could have happened because they feared that Anna's supporters could create problems. We want the PM to take a stand. Frankly, PM is really not the issue. The focus is, and should be on the Lokpal Bill."

As far as the support from the au-

thorities of the institute goes, Ritesh claims that several professors have encouraged the students' efforts, unofficially though.

Naval, another IITian, who was present at the site of the protest, says they were instructed by the cops not to be anywhere near the PM's route to the institute. "Humko lathi charge ki dhamki di gai thi. But thankfully, no student was hurt," he says. Another student, on condition of anonymity, told us that the students were told by the institute's authorities not to carry black flags. "We were asked not to do this as we could get blacklisted. The authorities had categorically mentioned that the institute would take no responsibility for any student who got arrested. So to some extent, students were pressurized."

Times of India ND 24/08/2011  
Delhi Times P-10

# Degree chhoti cheez hai, yeh andolan zaroori hai

IIT Kharagpur's Shashi Shekhar Singh tells us why it was more important to support Anna's campaign than receiving his degree from Prime Minister Manmohan Singh

Divya Pal

**F**or Shashi Shekhar Singh, a civil engineering student from IIT Kharagpur, supporting Anna's anti-corruption campaign was far more important than getting his M Tech degree at the 57th Convocation at his alma mater from chief guest PM Manmohan Singh on Monday. That's why this IITian didn't mind giving the convocation a miss. Even though he was in Kharagpur, he thought it was better to utilise the event as a means to spread the word and express his solidarity towards Anna's campaign. Shashi, who has allegedly been quoted as saying, "I will not accept my degree from the Prime Minister", states he is neither against any political party nor any particular individual, and that nothing can deter him from accomplishing his goal. "Degree ka kya hai, woh toh kal bhi mil sakti hai. Degree bahut choti cheez hai. Aur yeh andolan zyada zaroori hai. Kisi party vishesh ke liye andolan nahin hona chahiye bas vyavastha parivartan ke liye andolan hona chahiye. This is what Mahatma Gandhi believed in and now it is the responsibility of the youth to ensure that it happens as per his dream."

Shashi's birthplace is Bihar, but he insists he should be referred to as an Indian exclusive of his regional ethnicity. Having witnessed unethical ac-

tivities in his native state, Shashi speaks about the changes that Bihar has witnessed courtesy "vyavastha parivartan". "These things used to happen earlier. *Lekin ab wahan pe vyavastha parivartan hai.* It is corruption - a social evil - which has seeped into the system and the way we seem to have grown used to it, is what needs to be eradicated. This can't be done till we work towards it together. We are not against anyone; we are in support of Anna. If Bihar can improve, I'm sure India can also become a better place."

An engineering professor by profession, the 30-year-old Shashi (who teaches at MJ College of Engineering in Hyderabad) hasn't told his family about his support for Anna's anti-corruption campaign. "Frankly, I don't want to tell my parents. It would be great if they get to know about it through people. I haven't done anything wrong for which I need to be scared. As I have been saying, I don't call Anna's campaign a protest. I'm simply supporting Anna. I'm all ready for Jail *bharo andolan*, which anyone who believes in Anna should. Anna has shown us the path and this is not the time to back-track or to retrace our steps." Is he planning to come to Delhi and urge IIT-D students to support Anna? "I'm sure IIT-D students will also join the anti-corruption campaign. *Abhi woh kum jagein hain lekin jagenge zaroor.*"



Shashi Shekhar Singh

Hindu Chennai 22.08.2011 P-6

# Where have all the teachers gone?

The nation faces a shortage of 1.5 lakh engineering teachers. A look at the state of academics in this context.

ABDUL LATHEEF NAHA

**H**igher education in the country, particularly engineering education, is facing a crisis. It is pulling on with half the teacher strength it requires.

The government pressed a red button the other day when it was revealed in Parliament that the nation faced a shortage of more than three lakh teachers in its institutions of higher learning. In engineering education alone, the shortage is more than a lakh and a half.

The finding, revealed in the recent government assessment of faculty shortage, has come as a shock. What is more shocking is the increase in the shortage to 54 per cent from the 40 per cent a few years ago.

The government has swung into action by allowing institutions to hire expatriate Indians to make up for the shortage.

The Union Ministry of Human Resource Development has permitted the 15 Indian Institutes of Technology (IITs), premier engineering institutes in the country, to appoint non-resident Indians (NRIs) and people of Indian origin (PIOs) as permanent faculty as part of measures to tide over the teacher shortage. Foreign nationals, however, are not given permanent appointment.

But is this move a solution? Experts say it is inadequate.

The Lok Sabha was told a fortnight ago that 1,693 teachers were required immediately for the IITs and 1,522 for the 30 National Institutes of Technology (NITs). But that is just the tip of the iceberg.

Some 30-50 per cent of the teaching posts are vacant in top engineering institutions. The situation is worse in hundreds of private self-financing colleges.

A recent assessment made by an eight-member committee appointed by the Kerala government revealed that hardly one-fifth of the engineering institutions in the State met the stipulations made by the All India Council for Technical Education (AICTE). Of the 24 engineering colleges the committee inspected at random, only five were found to have met most of the stipulations.

## AICTE ratio

The AICTE currently stipulates a 1:14 teacher-student ratio for engineering institutions. "That itself is very high from a healthy academic perspective," said a senior professor of NIT, Calicut. Plans are afoot to bring down the teacher-student ratio in engineering institutions to 1:12. The ideal teacher-student ratio, experts say, is 1:10, which is the international standard.



**DELETERIOUS EFFECT:** A shortage of faculty leads to poor execution of student projects, which will, in turn, tell on placements.  
PHOTO: R.M.RAJARATHINAM

The Central engineering institutions, including the NITs and the IITs, started facing the faculty shortage with a 27 per cent increase in number of seats for other backward classes over three years from 2008 to 2010. This increase resulted in a cumulative increase of 54 per cent in faculty requirement, which remains unfulfilled for various reasons.

The lack of recruitment of supporting or non-teaching staff in recent years has compounded the problem. The ratio of teaching and supporting staff is 1:1.1 in Central engineering institutions.

When the student intake doubled in recent years with the increase in seats and courses, not a single appointment of supporting staff was made in the past nine years at the NIT, Calicut. The result is that the faculty is being forced to spend part of their time on clerical work, leading to a loss of much academic vigour. And the ultimate loser is the student.

The shortage of faculty affects the students in many ways. When there are not enough teachers, more students are often assigned to a single project, leading to a lack of attention from teachers and an eventual dilution in quality.

Besides, the choices before the students for their elective subjects are considerably reduced.

T.K. Suresh Babu, Professor and Head of Training and Placement at NIT, Calicut, says recruiters

from core engineering industry often give due weight to students who have done good projects. The faculty shortage has a direct bearing on the quality of projects on all engineering college campuses.

Ashalatha Thampuran, Principal of Mohandas College of Engineering and Technology, Nedumangad, says the faculty shortage was felt more in the middle-level cadre. The AICTE stipulates a faculty cadre ratio of 1:2.4 in the order of professor, associate professors, and assistant professors.

"There are no problems to fill the top-level posts of professors and principals as we get enough retired hands. The shortage at the entry level too is not felt so keenly as in the middle level, where people well positioned in the industry cannot be attracted to a teaching job," Dr. Thampuran says.

Although the AICTE has made M.Tech. degree mandatory for faculty, most private engineering colleges are yet to abide by it. The AICTE has given two more years to the colleges, knowing full well that there are not enough hands with M.Tech to teach.

Of the 121 engineering colleges in Kerala, hardly one-fourth offer M.Tech programmes. In the wake of a new AICTE stipulation and an appeal by Union Human Resource Minister Kapil Sibal, many institutions came forward to start postgraduate programmes. But the State's universities have not

been considerate. Several colleges were denied permission to do so.

For example, when the M.E.S. College of Engineering, Kuttippuram, applied for two postgraduate programmes, permission was given only for the computer science course and not for electronics and communication.

The faculty shortage is the worst in these two branches in almost all engineering colleges. The reason is simple. Those who graduate in them are much sought after by the industry.

Unattractive pay is another reason for the dearth of faculty in engineering colleges. Although the AICTE has stipulated a pay scale, not all private engineering colleges implement it.

"Only good pay can attract good people from the industry to teaching," V.H. Abdul Salam, Principal of the M.E.S. college, says.

P. Suresh Kumar, Principal of Government Model Engineering College, Thrikkakara, says the faculty shortage is not felt in the engineering colleges run by the State government. "The problem is mostly confined to the private sector," Dr. Kumar says.

When private engineering colleges, particularly those started in recent years, are worried about meeting the AICTE stipulations, including on faculty strength, top institutions such as the IITs and the NITs are worried about the dwindling quality of their research.

"Right now, we don't have a

mechanism to measure the quality. And that is where we survive," says Vineeth Paleri, Professor and former Head of the Department of Computer Science, NIT, Calicut.

Dr. Paleri, who had worked at Purdue University, U.S., one of the top 20 technical institutions in the world, says that as a professor at the NIT, he gets three times the workload that he used to get at Purdue. "Shortage of hands leads to an increasing workload for the faculty. When the faculty is so overloaded, the students suffer at all levels. And research is the worst casualty," he adds.

It is this lack of quality at higher level academics, particularly doctoral and post-doctoral research, which deprives India of technical institutions of international repute.

"We have IITs. But they are known only for churning out the best undergraduates. Good institutions worldwide are measured in terms of research — in terms of the number of Nobel laureates they create and patents they win," Dr. Paleri says.

Even when the country's education managers talk volumes about enhancing the quality, little is often done to walk the talk. That was, perhaps, why the National Association of Software and Services Companies (NASSCOM) observed a couple of years ago that hardly 25 per cent of the students passing out the country's engineering institutions were employable.

Mint ND 24/08/2011 P1

## ANNA EFFECT

# Academic interest up in corruption studies

BY PRASHANT K. NANDA & UTPAL BHASKAR

NEW DELHI

The intense public engagement with Anna Hazare's campaign against corruption along with the attendant saturation media coverage is having an unintended side effect. Academic institutions across the country are seeing rising interest in the issue as a research subject.

The Indian Institute of Management (IIM), Indore, has included corruption as a new elective.

"The response from students as well as corporate executives coming for short-term courses is very enthusiastic," said Sidhartha Rastogi, professor of economics at IIM Indore.

The Mudra Institute of Communications, Ahmedabad (MICA) and the Faculty of Management Studies (FMS) in Delhi are all seeing proposals from students who want to focus on the issue as part of their

## CORRUPTION IN CURRICULUM

### THE NEWS

The corruption issue has become a subject for research and coursework across universities, including IIMs.

### THE BACKGROUND

Central and state governments are embroiled in a series of corruption scandals. Hazare campaign for Jan Lokpal Bill has put authorities on the back foot.

### THE IMPLICATION

Academic discourse, research and case studies across colleges on corruption will lead to better awareness among youngsters, who form the majority of India's population.

course work.

By the end of September, IIM Indore's Rastogi said he will modify the elective and "include the Anna Hazare movement in the context of the Lokpal".

"This is kind of history in the

TURN TO PAGE 2 ▶

# Interest up in corruption studies

▶ FROM PAGE 1

NTMAH

making and we need to incorporate it," he said. "In future, this will be a great research subject."

IIM Indore's students have also conducted a survey across six IIMs on graft, the Lokpal Bill and the government's response.

Of the nearly 600 respondents, 81% didn't like the government version of the Lokpal Bill as opposed to 5% who supported it. At least 61% backed

the Jan Lokpal Bill, while 17% opposed it. The others had not read the Bill.

At Delhi University's FMS, students took part in a 3-hour session on Tuesday to discuss Brand Anna.

"Anna was projected as a new product in the market and (the discussion was about) how he managed to dent the image of existing market players like the Congress party," said Anubhav Kanodia, a second-year student at FMS.

Corruption is like a wound

and "Anna is working like a balm, hence, he and his movement interests all", said Harsh V. Verma, a professor at FMS.

"We don't want to stop here. We will write papers, do deeper research and come out with a case study," Verma added. "From my point of view, Anna is a successful brand."

Transparency International (TI), an organization that seeks to fight corruption, said there has been a rise in interest among researchers.

"The number of students ap-

proaching us for internship on corruption has doubled in 2011 from last year," said Anupama Jha, executive director at TI. "Many of them are law students."

Swati Attavar, an undergraduate Indian student at Cambridge University in the UK, said she was interested on a dissertation on corruption and that was why she approached TI. "Among Indian students in our university, this a subject of huge debate," said Attavar, currently on a break in Banga-

lore. "I think soon people will take it up as an academic debate."

"Youngsters do realize that corruption is a big issue and they are at a loss to find a role model. They found Anna as a model and are following him and his ideas even though many of them don't understand the nitty-gritty of the subject," Jha added.

Santosh Kumar Patra, a professor at MICA, said students at the institute have shown an increased interest in academic discourse on the subject, besides participating in anti-corruption rallies. No papers have emerged from this yet.

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Financial Express ND 24-Aug-11 P7

# IT sector to log growth of 16-18% in FY12: Nasscom

■ Sector slated to bring in about \$68-70 billion in revenue

by Bureau  
New Delhi, Aug 23

**D**ESPITE economic uncertainties in the US and Europe, India's software body Nasscom is confident of a 16-18% growth rate of the country's information technology (IT) industry with the sector slated to bring in about \$68-70 billion in revenue. The growth in the domestic market is estimated at 15-17%, with revenues of about \$19-20 billion.

This assumes significance as the industry body had presented a conservative outlook of 16-18% growth in IT exports in 2011-12 in the wake of the slow economic recovery in the US and uncertainty in the European region in February this year.

Though Nasscom president Som Mittal maintained a cautious outlook, he said: "There is no reason for us to be worried... We have spoken to customers and they are looking at expanding into geographies and bringing newer solutions to the market".

As for the business process outsourcing (BPO) industry, a Nasscom and Crisil report noted that India is positioned as a knowledge services powerhouse, with 70% share of the \$2.9-billion global industry. The industry has also generated employment for almost 70,000 people in over 100 firms.

"In the last decade, the in-

## INDIA'S BPO INDUSTRY

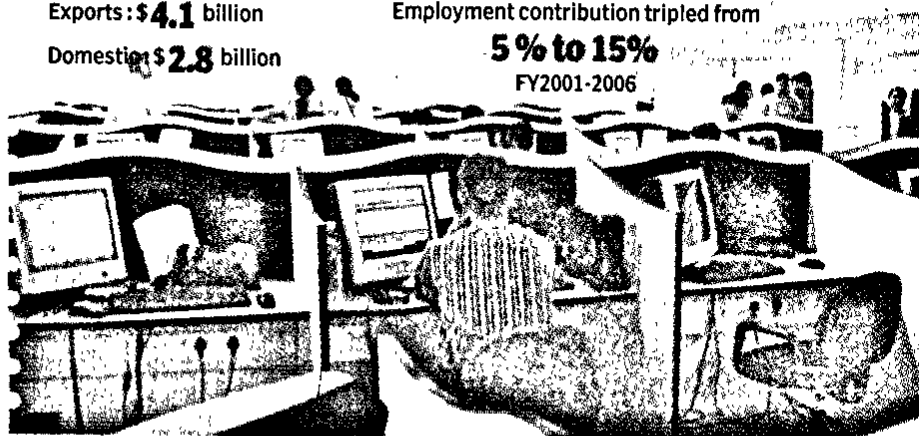
<b>37%</b> share of the global BPO market	<b>500+</b> companies offering BPO	<b>200+</b> MNCs and Captives	<b>66+</b> countries serviced	<b>35+</b> languages served
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Exports: **\$4.1** billion

Domestic: **\$2.8** billion

Employment contribution tripled from

**5% to 15%**  
FY2001-2006



dustry has grown 16 times in size, to reach \$16.9 billion (including domestic) in FY11. In addition to fuelling India's economy, direct and indirect employment creation is estimated at 4.5 million," said Nasscom president Som Mittal.

In fact, India is the leading BPO destination, accounting for over 37% of the total global sourcing BPO revenues, followed by Canada and Philippines.

However, Nasscom's former chairman and non-executive vice chairman of the country's largest BPO Genpact, Pramod Bhasin said: "Competition from China and the Philippines is a serious issue as the calibre of students coming from their colleges is better

than ours."

Further, lower profitability, billing rates, fiscal incentives and data security were also cited as factors having a negative impact on the industry.

The Nasscom-Crisil report -called 'India Knowledge Services Industry'- added that led by financial services and healthcare, the knowledge services outsourcing industry in India is expected to grow at a 22.2% CAGR over FY2010-15 to a \$5.6 billion market. While business research would continue to be the most widely adopted service line with a 39.4% share, representing a \$2.2 billion opportunity, the share of data analytics is expected to increase from

18.5% to 20.6% (\$1.15 billion) over the period.

Legal Process Outsourcing is also expected to record robust growth to a \$1.3 billion market by then.

The report emphasised that this represents the next wave of outsourcing as organisations push the envelope to exploit cost efficiencies by outsourcing elements of their core operations as opposed to outsourcing of supporting business processes.

"These include services like market research, business research, data management and analytics as well as outsourcing of legal process outsourcing, each of which is critical to a cohesive decision making process," the report said.



Mint ND 24/08/2011 P3

## TIGHTER NORMS

## Journalists may soon need law degree to report on Supreme Court

BY NIKHIL KANEKAL  
nikhil.k@livemint.com

NEW DELHI

New Supreme Court reporting norms, if enforced, will result in 80% of the journalists who have been covering proceedings being disqualified. The Supreme Court can bar any correspondent from coverage without offering any reasons under the new rules.

Issued by the court on Saturday, the norms require that permanent and temporary accredited print journalists have a professional law degree and at least seven years of experience. Electronic media reporters need, apart from the law degree, at least three-and-a-half-years of experience. The circular did not set a deadline for the norms to come into force. Court officials didn't throw light on when the circular would come into effect, when asked on Tuesday.

The new norms follow instances in which faults were found in coverage.

Two of these arose from coverage of the Vodafone tax dispute. Vodafone lawyer Harish Salve complained to the Supreme Court that a *Press Trust of India (PTI)* report on 10 August had misquoted him. Salve had argued that Vodafone could "avoid" tax as tax avoidance was permissible under law. Indian income-tax authorities have alleged that Vodafone evaded tax by structuring its \$11.2 billion transaction to buy out Hutchison's Indian cellular business through tax-saving routes. Salve spent more than a day demonstrating to the bench

the difference between tax avoidance and evasion, and that his client had acted in accordance with law.

The court sought a response from *PTI* on an application made by Salve after the agency's report.

On 18 August, *PTI's* lawyer Shyam Divan issued an unconditional apology to the court, Vodafone and Salve.

Chief Justice S.H. Kapadia's three-judge bench asked *PTI* to file a detailed affidavit explaining whether its reporter was present in the court at the time Salve made his argument. The court reportedly observed that norms for journalists needed to be revisited in light of the incident and what it said were other recent inaccurate reports.

Previously, Kapadia had expressed displeasure at a 15 December news report in a national daily that said the judiciary wanted to retain 1% of the ₹2,500 crore deposit made by Vodafone to the court's registry. The report suggested that a "cash-strapped" judiciary was trying to source funds from "novel" methods such as these. Kapadia had then said: "People write whatever they want." But the court did not initiate any action against the reporter or the newspaper.

Different benches of the court have, in the past, pointed to inaccurate or sensational news reports. However, *Mint* could not immediately ascertain the immediate reasons for the revision of the norms.

A.I.S. Cheema, secretary general of the court, the senior-most official on the administrative side, did not have time to

meet this reporter on Tuesday for clarity on reasons for revising the norms.

The court's media officials said reporters could make representations that would be forwarded to decision makers.

Justice Dalveer Bhandari, the Supreme Court judge in charge of granting accreditation to journalists, could not be reached on phone. His staff said he would not be available to comment till later this week.

A media law expert said India has an open court system that inspires confidence among people on the judiciary's functioning.

"In India, unlike in the US, the press has no independent right under the freedom of expression. The journalist exercises his right as a citizen of this country under Article 19 (1)(a) and also acts as a trustee of the public's right to know. In certain situations, he might get more access than others, but technically under our open court system that shouldn't be necessary," said the expert, who did not want to be named.

"Everyone can have access as it's meant to be a check on the judges. It's a check on the system. What is to stop me if I go into a court as lay person and write about something which I think is worthy of sharing with the public? As long as I'm not distorting the proceedings,

there should be no problem," this person said.

The Supreme Court has expressed its appreciation for the role played by the press in its national reports. "Supreme Court attached great importance to the role of media and complementary to that of judicial organ in a democratic polity. In order to strengthen this partnership, the court took certain initiatives for mutual benefit," said the 2008-09 report as it elucidated programmes organized by it to train court correspondents.

A February 2002 report in *Frontline* magazine cited a Supreme Court judgement that contained a defence of the freedom of the press. "Public trial in open court is undoubtedly essential for the

**Print and electronic media journalists will also need to have at least 7 years and three-and-a-half years of experience, respectively**

healthy objective and fair administration of justice. Trial held subject to public scrutiny and gaze naturally acts as a check against judicial caprice or vagaries and serves as a powerful instrument for creating confidence of the public in the fairness, objectivity and impartiality of the administration of justice."

There are currently 14 permanent accredited correspondents in the Supreme Court and approximately 80 temporary accredited journalists, according to the court's officials.

**Editors react**  
Newspaper and television editors said the requirement for a law degree might be excessive and that the unilateral provision in the norms to withdraw a journalist's accreditation was not desirable.

"Reporters need not have a law degree to report on the Su-

preme Court. They need to have strong news sense and an acquaintance of legal nuances," said Arnab Goswami, editor-in-chief, Times Now.

"The new norms seem overly restrictive and will make it more difficult for the media to cover the Supreme Court properly," said Siddharth Varadarajan, editor of *The Hindu*. "While I share the concerns of the honourable judges that court proceedings are sometimes not reported accurately, the solution lies in proper editorial supervision by our newspapers and TV channels, rather than by specifying, with mathematical precision, the onerous qualifications court reporters must possess in order to be given access to a court room."

"In the absence of access, there may actually be a greater likelihood of inaccurate reporting as journalists will be forced to rely on one-sided accounts of courtroom proceedings by lawyers representing their clients," he said.

Sanjay Gupta, editor, *Dainik Jagran*, published by *Jagran Prakashan Ltd*, said: "As an editor, I will anyway not hire a fresher to report on Supreme Court judgements. However, I don't think there should be a prerequisite for reporters to have a degree in law. If reporters have adequate experience and are reporting judgements intelligently, and if the editors don't have an issue, I don't think it's fair for the court to then have stringent norms."

"I don't want to comment much on the revised norm to withdraw the accreditation without giving any reason. Withdrawal of accreditation should be a bilateral dialogue between the authority and the newspaper. The editors have a right to know when a particular legal correspondent's accreditation is withdrawn," he added.

*Abhilasha Ojha contributed to this story.*

## BOTTOMLINE

# World has 8.74 million species

**AASHIMA DOGRA**  
LONDON, AUG. 23

There are 8.74 million species in the world, give or take 1.3 million, and around 90 per cent of them remain undiscovered, according to the calculations of a group of pioneering scientists. They are the first ones to offer a precise figure for the total number of living species in the ecosystem; for decades this crucial statistic has been considered to lie anywhere between three and

100 million.

"This work deduces the most basic number needed to describe our living biosphere," says author Boris Worm of Dalhousie University, Canada. "If we did not know — even by an order of magnitude (1 million? 10 million? 100 million?) — the number of people in a nation, how would we plan for the future? It is the same with biodiversity."

This new study does point to a more workable range by considerably narrowing it. It has also

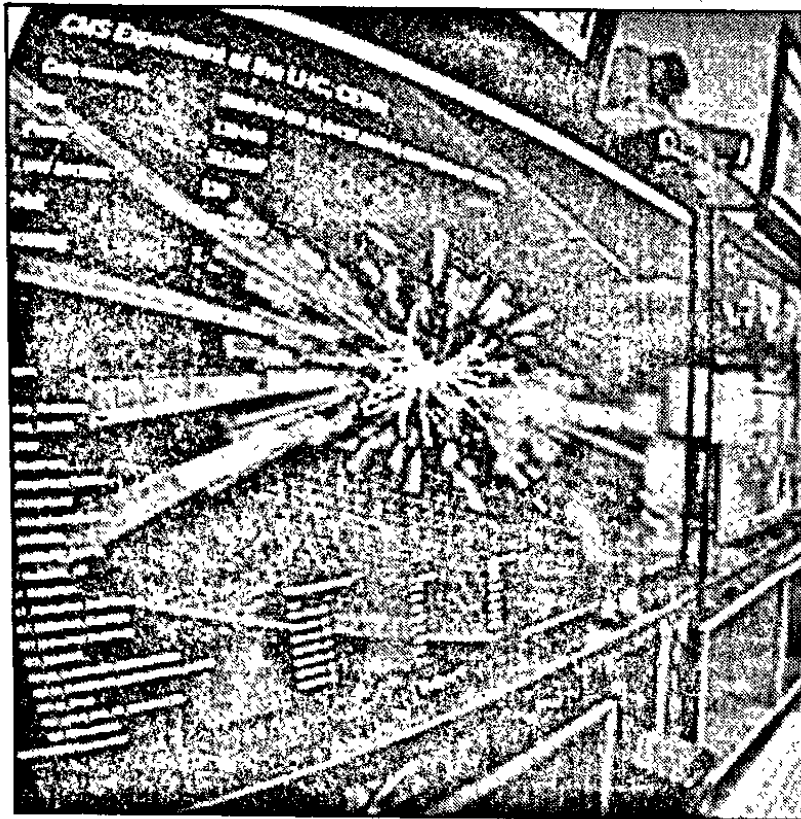
revealed that after 250 years of rigorous taxonomy, only 14 per cent of species on land and nine per cent in the oceans have been recorded.

"The immense effort entering all known species in taxonomic databases makes our analysis possible," says co-author Derek Tittensor of Microsoft Research and the UN Environment Programme's World Conservation Monitoring Centre. "As these databases grow and

improve, our method can be refined and updated to provide an even more precise estimate."

This prediction was made from statistical analysis based on a simple approach: number of higher taxonomy categories are linked to number of species within them. The scientists spotted this consistent pattern, they call "former predicts the latter", in the classification and simply extrapolated to get the number of species in each kingdom.

# Higgs boson may be a mirage, say scientists



ROBERT EVANS

SCIENTISTS chasing a particle they believe may have played a vital role in creation of the universe indicated they were coming to accept it might not exist after all.

But they stressed that if the so-called Higgs boson turns out to have been a mirage, the way would be open for advances into territory dubbed "new physics" to try to answer one of the great mysteries of the cosmos.

The CERN research center, whose giant Large Hadron Collider (LHC) has been the focus of the search, said it had reported to a conference in Mumbai that possible signs of the Higgs noted last month were now seen as less significant.

A number of scientists from

the center went on to make comments that raised the possibility that the mystery particle might not exist.

"Whatever the final verdict on Higgs, we are now living in very exciting times for all involved in the quest for new physics," Guido Tonelli, from one of the two LHC detectors chasing the Higgs, said as the new observations were announced.

CERN's statement said new results, which updated findings that caused excitement at another scientific gathering in Grenoble last month, "show that the elusive Higgs particle, if it exists, is running out of places to hide."

The centre's research director Sergio Bertolucci told the conference, at the Indian city's Tata Institute of Fundamental

Research, that if the Higgs did not exist "its absence will point the way to new physics."

Under what is known as the Standard Model of physics, the boson, which was named after British physicist Peter Higgs, is posited as having been the agent that gave mass and energy to matter just after the Big Bang 13.7 billion years ago.

As a result, flying debris from that primeval explosion could come together as stars, planets and galaxies.

In the subterranean LHC, which began operating at the end of March 2010, CERN engineers and physicists have created billions of miniature versions of the Big Bang by smashing particles together at just a fraction under the speed of light.

The results of those collisions are monitored by hundreds of physicists not just at CERN but in linked laboratories around the world which sift through the vast volumes of information generated by the LHC.

Scientists at the US Fermilab near Chicago have been in a parallel search in their Tevatron collider for nearly 30 years. Last month they said they hoped to establish if the Higgs exists by the end of September, when the Tevatron closes down.

For some scientists, the Higgs remains the simplest explanation of how matter got mass. It remains unclear what could replace it as an explanation. "We know something is missing, we simply don't quite know what this new something might be," wrote CERN blogger Pauline Gagnon.

"There are many models out there; we simply need to be nudged in the right direction," added Gagnon, an experimental physicist. — Reuters

**HindustanTimes**

**Title : career 1 science MECHANICAL ENGINEER - Technically correct - THE LOWDOWN**

**Author :**

**Location :**

**Article Date : 08/24/2011**

**career science 1 MECHANICAL ENGINEER**

**Technically correct**

**THE LOWDOWN**

The invention of wheel is said to be a product of mechanical engineering. About 5,600 years later, mechanical engineers are adding to, or improving on products to keep everything running on well-oiled wheels. Mechanical engineering is about the design, analysis, manufacture and maintenance of anything that has moveable components. Its sub-divisions are: a) production - these engineers make objects; b) designing mechanical equipment - professionals in this line work on, optimizing performance designs; c) Thermal and fluid sciences - those in this area design air-conditioners, fans, turbines, steam boilers and power plants

**■ CLOCKWORK**

The average day of a mechanical engineer working in the R&D division of an automobile company:  
**7.30am:** Leave for office  
**8am:** Breakfast in office canteen  
**8.15am:** Look at the day's activities in the weekly plan  
**8.45pm:** Departmental meeting

with section head to discuss problems, progress, field complaints or test issues  
**9.15am:** Tea break  
**9.28am to 1.15pm:** Check draw-



ings by CAD (computer-aided design) engineers  
**1.15pm:** Lunch  
**1.40pm:** Visit the testing lab. Monitor progress of products (eg steering chassis under development)  
**6.30pm:** Leave for the day

**Mechanic marvels:** Mechanical engineers add to, or improve on products to keep everything running on well-oiled wheels



MANUEL SANCHEZ

**■ THE PAYOFF**

Entry-level engineers get ₹3 lakh to ₹4 lakh a year. Pay hikes depend on your performance. An engineer with five to nine years' work experience makes ₹7 lakh to ₹15 lakh a year

**■ SKILLS/TRAITS**

- Affinity for machinery
- A problem-solving attitude
- Good analytical skills
- Innovative approach to do things
- Team spirit
- Physical stamina
- Good communication skills

**■ GETTING THERE**

After completing class 12 in science (physics-chemistry-maths), do a four-year degree course in an engineering college or a three-year (four-year part-time) diploma course at a polytechnic. Another option is the Institution of

Mechanical engineers find placements in various industries like automobile, power, manufacturing and management consultancy sectors, to name a few

Samsheer, professor and associate head, dept of mechanical engineering, Delhi Technological University



Mechanical Engineers' technician engineers and the associate membership (sections A and B) examinations. Clearing this will give you a qualification equivalent to a diploma from a state polytechnic or a degree from an Indian university. The Institution of Engineering (India), too, conducts such an examination. Getting the best jobs depends on the level and 'market value' of a mechanical engineer's credentials. For engineering research or design positions, it is advisable to earn a PG degree from a major institution, such as an IIT. For consultancy or management positions, a degree from an institute like an IIM will stand you in good stead

**■ INSTITUTES AND URLS**

- Indian Institutes of Technology, Bombay, Delhi, Guwahati, Karpur, Kharagpur,

- Madras, Roorkee, Bhubaneswar, Gandhinagar, Hyderabad, Indore, Mandi, Patna, Purjib, Rajasthan
- <http://jee.iitd.ac.in/>
- Banaras Hindu University [www.bhu.ac.in](http://www.bhu.ac.in)
- IISM (Indian School of Mines) University, Dhanbad [www.ismddhanbad.ac.in](http://www.ismddhanbad.ac.in)
- Birla Institute of Technology and Science, Pilani [www.bits-pilani.ac.in](http://www.bits-pilani.ac.in)
- Delhi Technological University [www.dtu.edu](http://www.dtu.edu)

**■ PROS AND CONS**

- Job options in many different industries
- Your work may contribute to human development/comfort as well as environment
- degradation
- Could face high temperature or noise levels at work

Times of India ND 24/08/2011 P-19

# Now, just light a bulb to switch on your broadband

London: Imagine that by simply turning on the light bulb in your room, you can also switch on your wireless Internet connection at home.

Well, it's a reality now, thanks to a leading British physicist of Edinburgh University who claims to have developed a technology which can send data through the same connection as a normal lamp.

Prof Harald Hass says the invention, dubbed D-Light, can send data faster than 10 megabits per second, which is the speed of a typical broadband connection, by altering the frequency of the ambient light in the room. He says that other possibilities of the device — which he has dubbed "Li-fi", or Light Fidelity — include sending wireless data from "white space" in your TV spectrum or unused satellite signals.

By replacing old fashioned incandescent models with LED bulbs he has claimed he could turn them all into internet transmitters, the 'Daily Mail' reported. It has new applications in hospitals, airplanes, military, and even underwater. Aeroplane passengers could

© Moment/cultura/Corbis



## ONE-STOP SOLUTION

in theory be able to surf the Internet from signals beamed out of the lights on board, according to the physicist.

"The way we transmit wireless data is inefficient electromagnetic waves, in particular radio waves which are limited, they are sparse, they are expensive and only have a certain range. "It is this limitation which does not cope with wireless data, and we are running out of efficiency. Light is part of the electromagnetic spectrum... wouldn't it be great to use it for wireless communications?" prof Hass said. PTI

## 'God particle' may not exist at all: Experts

Geneva: Scientists chasing a particle they believe may have played a vital role in creation of the universe indicated on Monday they were coming to accept it might not exist after all.

But they stressed that if the so-called Higgs boson turns out to have been a mirage, the way would be open for advances into territory dubbed "new physics" to try to answer one of the great mysteries of the cosmos.

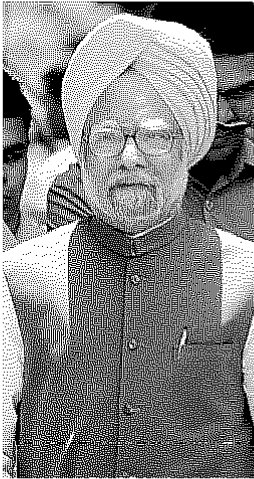
The CERN research center, whose giant Large Hadron Collider (LHC) has been the focus of the search, said it had reported to a conference in Mumbai that possible signs of the Higgs noted last month were now seen as less significant.

A number of scientists from the center went on to make comments that raised the possibility that the mystery particle might not exist. "Whatever the final verdict, we are living in very exciting times for all involved in quest for new physics," Guido Tonelli, from one of the two LHC detectors said. CERN's statement said new results show that the elusive Higgs particle, if it exists, is running out of places to hide." REUTERS

Raj Express Bhopal 23.08.11 P-7

## अन्ना इफेक्ट

खड़गपुर। प्रधानमंत्री मनमोहन सिंह के आईआईटी खड़गपुर पहुंचने के कुछ घंटे पूर्व संस्थान के छात्रों और कुछ अन्य ने परिसर के बाहर अन्ना हजारों के आंदोलन के समर्थन में प्रदर्शन किया। प्रधानमंत्री संस्थान के सालाना दीक्षांत समारोह में शामिल होने के लिए आए थे। प्रदर्शनकारियों ने गांधीवादी हजारों के आंदोलन के समर्थन में नारे लगाए। उन्होंने दावा किया कि वे जन लोकपाल विधेयक को जल्दी स्वीकार किए जाने की मांग के साथ परिसर से करीब एक किमी दूर 'धरना मंच' पर पिछले सात दिनों से क्रमिक भूख हड़ताल कर रहे हैं। 'खड़गपुर नागरिक मंच' के बैनर तले प्रदर्शनकारियों ने धरना मंच पर गांधी टोपियां पहन रखी थीं। वे हजारों के समर्थन में नारेबाजी कर रहे थे। दीक्षांत समारोह शांतिपूर्वक संपन्न हो गया और कोई अप्रिय घटना नहीं हुई। संस्थान के तीन छात्र प्रदर्शन में शामिल हुए।



और सूचना प्रौद्योगिकी क्रांति के दौर से गुजर चुकी है। उन्होंने कहा कि लेकिन इनमें से कोई एक क्षेत्र व्यक्तिगत तौर पर इतनी बड़ी समस्या और भारत जैसे विविधतापूर्ण अर्थव्यवस्था के लिए रामबाण औषधि नहीं हो सकती है। उन्होंने इन सभी क्षेत्रों को समग्र रूप से मिलकर आगे बढ़ने का सुझाव दिया।

# पीएम के आईआईटी खड़गपुर पहुंचने से पहले छात्रों का प्रदर्शन समस्याओं का वैज्ञानिक समाधान हो: पीएम

खड़गपुर (एजेंसी)। प्रधानमंत्री मनमोहन सिंह ने समाज को प्रभावित करने वाली जटिल समस्याओं का वैज्ञानिक एवं तकनीकी समाधान निकाले जाने का आह्वान किया है। प्रधानमंत्री ने कहा कि चाहे बात तीव्र शहरीकरण की हो, जलवायु परिवर्तन की या ऊर्जा संरक्षण की.... हमारी वैज्ञानिक एवं उद्यमिता से जुड़ी ऊर्जा को दूसरी हरित क्रांति के लिए व्यवस्थित रूप से आगे बढ़ाना चाहिए और विकास एवं जीवन से जुड़े नए रास्ते तलाशने चाहिए। इस दिशा में लाभदायक कारोबार के लिए हरित विकास का रास्ता अपनाया जाना चाहिए। आईआईटी, खड़गपुर के 57वें दीक्षांत समारोह को संबोधित करते हुए सिंह ने कहा कि हमें अपने वृहद बौद्धिक और भौतिक संसाधनों के माध्यम से अपनी उत्पादकता का विकास करने की जरूरत है। अगली पीढ़ी के विकास के लिए प्रबंधन और तकनीकी साप्टवेयर की जरूरत है।

## देश में अर्थव्यवस्था के लिए रामबाण नहीं

प्रधानमंत्री ने कहा कि अर्थव्यवस्था कृषि क्रांति, विनिर्माण क्रांति

## एशिया के लिए भारत का द्वार फिर बन सकता है कोलकाता

प्रधानमंत्री मनमोहन सिंह ने कहा कि कोलकाता एक बार फिर एशिया के लिए भारत का द्वार और 'पूरब में नया उदईमान सूर्य' बन सकता है। प्रधानमंत्री ने कहा कि पूर्व में कोलकाता शिक्षा और रचनात्मकता का महान केंद्र रहा है। इसने पिछले कुछ दशकों में यह स्थान खो दिया। हालांकि, मैं इमानदारी से महसूस करता हूँ कि हमारे पूरब में एक नया सूर्य उग रहा है। भारतीय प्रबंधन संस्थान की स्वर्ण जयंती समारोह को संबोधित करते हुए सिंह ने कहा कि स्वीन्द्रनाथ टैगोर ने कभी भारत की एशियाई पहचान और एशिया के साथ भारत के संबंधों को नए सिरे से रेखांकित किया था। उन्होंने कहा कि समय आ गया है जब हम सभ्यता से जुड़ी इस धरोहर का लाभ उठाकर आगे बढ़ें और बुद्धिमता, ज्ञान और अनुभव से पश्चिम बंगाल की अर्थव्यवस्था को पुनर्जीवित करें।

## काकोडकर समिति के सुझावों पर विचार

प्रधानमंत्री ने कहा कि विभिन्न आईआईटी के कामकाज के बारे में अनिल काकोडकर समिति की सिफारिशों पर इन प्रमुख संस्थानों की एक परिषद द्वारा गौर किए जाने के बाद सरकार उन पर विचार करेगी। विभिन्न आईआईटी के कामकाज पर गौर करने के लिए गठित काकोडकर पैनल ने कई महत्वपूर्ण सिफारिशें की हैं। इन पर शीघ्र ही विभिन्न आईआईटी की परिषद द्वारा विचार किया जाएगा। काकोडकर समिति ने इस बात की ओर ध्यान दिलाया कि विभिन्न आईआईटी के माध्यम से होने वाली पीएचडी की संख्या अमेरिका या चीन के इसी प्रकार के संस्थानों की तुलना में बेहद कम है।

## 9 प्रतिशत विकास दर संभव

प्रधानमंत्री मनमोहन सिंह ने सोमवार को कहा कि नौ प्रतिशत आर्थिक विकास दर का लक्ष्य वैश्विक अर्थव्यवस्था के मौजूदा हालात को देखते हुए बहुत महत्वाकांक्षी है, लेकिन यदि अपर्याप्त अधोसंरचना की समस्या से निपट लिया जाए और संसाधनों का बेहतर प्रबंधन कर लिया जाए तो इस लक्ष्य को हासिल किया जा सकता है। प्रधानमंत्री ने कहा कि चूंकि हम 11वीं पंचवर्षीय योजना अवधि में लगभग 8.2 प्रतिशत वृद्धि दर हासिल कर चुके हैं, लिहाजा ऐसा लग सकता है कि नौ प्रतिशत वृद्धि दर हासिल करना कठिन नहीं है।

## केंद्र-राज्य संबंध मुद्दा एनडीसी में उठेगा

प्रधानमंत्री मनमोहन सिंह ने वाम मोर्चे के एक प्रतिनिधि मंडल को आश्वासन दिया है कि वह केंद्र-राज्य संबंधों को नए नजरिए से देखने और राज्यों को और राशि देने के मुद्दे को राष्ट्रीय विकास परिषद (एनडीसी) की बैठक में उठाएंगे। विपक्ष के नेता और वाम मोर्चे के छह सदस्यीय प्रतिनिधि मंडल की अगुवाई करने वाले सूरज्य कंत मिश्रा ने सिंह के साथ बैठक के बाद कहा कि प्रधानमंत्री ने आश्वासन दिया है कि वह दोनों मुद्दों (केंद्र-राज्य संबंधों तथा प्रदेशों को और राशि दिए जाने) पर एनडीसी की अगली बैठक में चर्चा करेंगे।

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## China maps Brahmaputra, Indus for dams

Beijing: Bracing to build a number of water projects in Tibet, including a dam on Brahmaputra, Chinese scientists have completed a comprehensive satellite study of cross-border Tibetan rivers determining their exact sources besides measuring the length of their drainage basins.

Besides mapping out Brahmaputra's course, the photo analysis using expeditions and satellite imagery, the researchers from the Chinese Academy of Sciences also collected details about the flow of Indus river which flows through India and Pakistan besides Salween and Irrawaddy rivers, which traverse Myanmar.

Previously, the sources of the four rivers were never clearly designated, and differing accounts regarding their lengths and drainage areas confused researchers for many years. The results show that Brahmaputra originates from the Angsi glacier, in Tibet, not Chemayungdung glacier. ■

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## चीन ने खोज निकाला ब्रह्मपुत्र और सिंधु नदियों का उद्गम

पेइचिंग (एजेंसी)। ब्रह्मपुत्र पर बांध बनाने समेत तिब्बत में कई जल परियोजनाओं को अंजाम देने के लिए तैयार बैठे चीन के वैज्ञानिकों ने तिब्बत की सीमा से बहने वाली नदियों के उद्गम स्थल और उनके मार्ग की लंबाई का व्यापक उपग्रह अध्ययन पूरा कर लिया है। चाइनीज एकेडमी ऑफ साइंसेज (सीएएस) के वैज्ञानिकों ने ब्रह्मपुत्र के मार्ग का उपग्रह से ली गई तस्वीरों का विश्लेषण करने के साथ भारत-पाकिस्तान से बहने वाली सिंधु और म्यांमार के रास्ते बहने वाली सालवीन और इरविडी के बहाव के बारे में भी पूरा विवरण जुटा लिया है। सीएएस के तहत आने वाले इंस्टीट्यूट ऑफ रिमोट सेंसिंग एप्लिकेशंस के शोधकर्ता लियू शाओचुआंग ने शिन्हुआ संवाद समिति को बताया कि इसके पहले चार नदियों के उद्गम कभी स्पष्ट नहीं हुए थे और इनकी लंबाई और क्षेत्र के बारे में आ रही विभिन्न जानकारीयों ने शोधकर्ताओं को कई साल तक भ्रम में रखा था क्योंकि इस कार्य में प्राकृतिक परिस्थितियों से जुड़ी कई बाधाएं आती थीं और सर्वेक्षण की तकनीक भी सीमित थी। लियू ने अपने विश्लेषण के आधार पर बताया कि ब्रह्मपुत्र (तिब्बती भाषा में यारलुंगजांगबो) का उद्गम स्थल तिब्बत के

### पूरे मार्ग का किया अध्ययन



बुरांग काउंटी स्थित हिमालय पर्वत के उत्तरी क्षेत्र में स्थित आंग्सी ग्लेशियर है, न कि चीमा-युंगदुंग ग्लेशियर, जिसे भूगोलविद् स्वामी प्रणवानंद ने 1930

के दशक में ब्रह्मपुत्र का उद्गम बताया था। नए शोध परिणामों के मुताबिक ब्रह्मपुत्र नदी 3,848 किलोमीटर लंबी है और इसका क्षेत्रफल 7,12,035 वर्ग किलोमीटर है, जबकि पहले के दस्तावेजों में नदी की लंबाई 2,900 से 3,350 किलोमीटर और क्षेत्रफल 520,000 से 17 लाख 30 हजार वर्ग किलोमीटर बताया गया था। इस आंकड़े का इस्तेमाल भारत और चीन के बीच विशेषज्ञ स्तर की पांचवीं बातचीत में हो सकता है। यह बातचीत ब्रह्मपुत्र से जुड़े आंकड़ों के शोध और बाढ़ प्रबंधन के लिए की जानी है।

चीन ने पिछले दिनों तिब्बत में लगभग एक अरब 80 करोड़ डॉलर की लागत से जल परियोजनाएं शुरू करने की घोषणा की है। लियू के दल ने बताया कि सिंधु नदी का उद्गम तिब्बत के गेजी काउंटी में कैलाश के उत्तर-पूर्व से होता है। नए शोध के मुताबिक, सिंधु नदी 3,600 किलोमीटर लंबी है, जबकि पहले इसकी लंबाई 2,900 से 3,200 किलोमीटर मानी जाती थी। इसका क्षेत्रफल 10 लाख वर्ग किलोमीटर से भी ज्यादा है। सिंधु नदी भारत से होकर गुजरती है लेकिन इसका मुख्य इस्तेमाल भारत-पाक जल संधि के तहत पाकिस्तान करता है।