

Newspaper Clips

October 10, 2011

Financial Express, ND 10/10/2011 P-11

Murthy vs Bhagat IS A MISMATCH

DeCODE
Darlington
Jose Hector



IT'S not clear as to what author Chetan Bhagat has against Infosys founder chairman N R Narayana Murthy. His statement that Murthy runs a body shopping company is astonishing to say the least. It is difficult to understand the rationale behind such a comment and at first go it looked totally out of place, considering that the stature of the two men hardly match.

It all started when Murthy, while giving a speech in New York at the 'Pan IIT Summit', mentioned that the standard of students entering IITs had dropped. He attributed this to the kind of coaching classes taken up by IIT aspirants. Murthy's comments looked perfectly legitimate to most. After all, he has employed several IITians in his own firm. He himself is an IITian.

But somehow, this did not go down well with Bhagat, who is an author popular in some quarters but widely criticised by the elite class

of writers. His first book 5 Point Someone was a best seller and his other works like One Night @ the Call Centre and The 3 Mistakes of My Life did good business too. And he is an IITian. That's a good setting alright, but what does he have against Murthy?

For years, people who had an axe to grind with Murthy have used the term 'body shopping' to define outsourced IT work. Wikipedia describes body shopping as the practice of consultancy firms recruiting information technology workers in order to contract their services out on short-term bases. ".....body shopping is disparaged by those IT services companies in India that assert that they provide real services (such as software development) rather than the 'sham' of merely farming out professionals to overseas companies," Wikipedia states.

It's a favourite term with some Americans to describe the kind of work that Indian IT services companies do. IT chieftains have always loathed the use of that term, and unless someone is a huge critic of the Indian IT system, no one puts it on the table. But Chetan Bhagat has.

Now let us look at some of the facts. The Indian IT services industry is worth \$60 billion and carries with it the hopes of thousands of middle class IT workers. It is an industry which has single-handedly



BHAGAT MUST BE HAVING HIS OWN POINTS OF VIEW, BUT HE HAS PROBABLY OVER REACTED. AND HE NEED NOT HAVE TAKEN PERSONALLY A COMMENT ON IIT'S

uplifted the fortunes of the aspirational youngster, making him a globe trotting individual confident of his stride. Narayana Murthy is in many ways the father of the Indian IT industry, who perfected the global delivery model. To him goes the credit for building up an industry from scratch and making it a formidable force.

In short, it was Murthy along with Premji, Shiv Nadar and the TCS leadership team, who put India on the global corporate map on a scale that threatened advanced economies. It was with the advent of IT that Corporate India could, arguably for the first time, compete on a global stage and win on a consistent basis.

To criticise and put down an industry which has offered handsome jobs to lakhs of people does not look a fair act. Bhagat must be having his own points of view, but he has probably over reacted. And he need not have taken personally a comment on IITs.

Earlier this year minister Jairam Ramesh was put in a corner for his comments on the quality of IIT faculty. He had said that IITs are good because of the quality of the students and not that of the faculty. This had caused a furore at the time, with the faculty reacting strongly.

But Bhagat's comments have probably overlapped that incident. His comments mirror what Ramesh had to say about the students. It is clear that he does not believe that the quality of students has slid. But he could have put his point across in a much more subtle fashion. But a controversy always gets headlines, doesn't it?



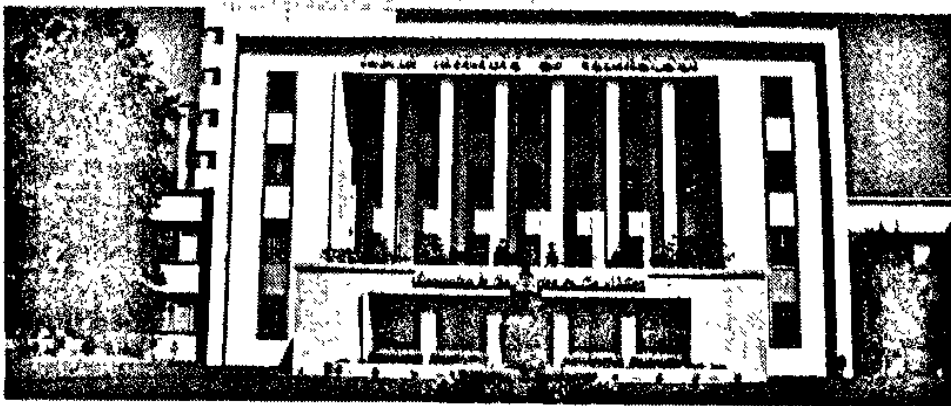
The Pioneer ND 10/10/2011 P-8

IITs must reinvent for the future

Exactly six decades after the first IIT opened at Kharagpur in 1951, an apt debate is currently raging on the quality of students who graduate from these premier institutions. Too busy acquiring skills necessary to man the nascent heavy industries that were to be established in the 1960s and 1970s, young engineers of that era had little time to develop elitist pretensions. The genesis of an entirely misplaced sense of runaway superiority came about much later as the urge to acquire 'Brand IIT' overtook the desire to imbibe key engineering and technical skills. This also coincided with the era of coaching classes that catered to a frenzied fan following of sorts perpetuated by students desperate to walk through IIT's lofty portals.

The IITian then sought fresh pastures in the burgeoning MBA stream and secured himself a place in the premium banking and financial sectors. Our protagonist effortlessly stepped into the nuances of analytical decision making, within a complex matrix and soon found himself a place on the boards of top companies.

The advent of IT saw the IITian learn the ropes of the new trade and soon



enough he was leading the US software space. And before you knew it, the IITian had tapped into his entrepreneurial genius and started new ventures in Silicon Valley and elsewhere.

Eventually, the global IT axis shifted to India and today this nation is on the threshold of inheriting the mantle of the pioneer in the IT industry. If we have to retain a distinguished leadership, we too must possess the wherewithal to groom extraordinary human resource and provide a rich petri dish that will cultivate and nurture human genius.

This is where the observations of Infosys Chairman N Narayana Murthy

become relevant. We do need premier institutions to lead us to newer horizons, to expand and conquer. And the worn pathways leading up to the portals of tall institutions will not take us to new destinations. Noted author and IITian Chetan Bhagat, who extols the enviable role the IITs continue to play in the global business district, should acknowledge that we now need to scale up our institutions and their aspirants to meeting the demands of the future. In other words, it is time to reinvent the IITs and take them to an all new level.

**R Narayan
Ghazlabad**

Financial Chronicle ND 10/10/2011 P-10

Has Murthy invested in coaching centre?

FC reader points to Catamaran's 'for-profit' investment in education

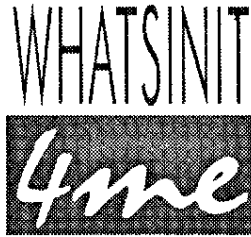
I APPRECIATE the validity of the argument you have made in your article, *Why don't we have a Steve Jobs?* (FC Weekend, Page 17) I wonder, however, why *Financial Chronicle* and other media organisations have not reported the obvious hypocrisy of NR Narayana Murthy's criticism of the scholarly quality of IIT entrants.

While blaming coaching classes for the decline in quality of IIT entrants, Murthy omitted to tell his audience that he himself has significant investment in the lucrative IIT test

preparation business.

Catamaran, Murthy's private equity firm, has invested Rs 2.5 crore in ACE, a Bangalore-based test preparation firm that offers training for IITJEE, AIEEE, PMPD, CBSE-11 and 12, CET, Foundation IIT and NTSE. There are more instances of Murthy's degeneration into a con artist that have not been highlighted by the media.

Catamaran has made very large investments in Manipal Universal Learning. Such an investment amounts to a for-profit pri-



vate equity firm finding a back-door entry into education. The law of the land does not allow PE investments in education and educational institutions should only be run by non-profit trusts and societies.

PE investors employ a 'two tier' system to get a

back-door entry into educational institutions.

They use or set up a private, for-profit company and a non-profit trust or society. The former extracts private profits from the trust/society, which runs the educational institution, in a manner that invariably results in breaking of laws governing non-profit trusts/societies and income tax, and regulations governing educational institutions, such as charging of fees.

Catamaran has invested in Wellspring, a private healthcare provider

and yet Murthy has assumed the chairmanship of Public Health Foundation of India (PHFI), a public-private partnership (PPP) that influences government policy on health care and medical education.

PHFI's public health schools are unrecognised, unaccredited and yet have been receiving crores of rupees in grants and free parcels of land from central and state governments.

*Kapil Bajaj
New Delhi*

Times of India ND 10/10/2011 P-1

IIT heads echo Murthy on dipping quality

Hemali Chhapla | TNN

Mumbai: N R Narayana Murthy's statement about the declining quality of students joining the IITs has found an echo even among IIT heads.

IIT Madras director Bhaskar Ramamurthi says most students come with a heavy coaching hangover. "There is a limit to what

► 'Want to sell soaps', P 16

an instrument like an entrance exam can do. Taking school scores into consideration should allow us to get well-rounded students," he said. Gautam Baru, IIT-Guwahati director, says aspirants start preparing early. "By the time they join the IIT system, they are mentally fatigued."

In IIT, but 'they want to sell soaps'

Hemali Chhapla | TNN

Mumbai: "They want to sell soaps, not become engineers." This is IIT-Guwahati director Gautam Baru's observation of students who often make it to IITs after long years of cramming, even when their aptitude is suspect. "Many of them are not even interested in engineering," he says, an assessment borne out by where they eventually land up. Placement numbers that show over 50% graduates join managerial positions in consultancy firms, FMCG companies and the finance sector.

There was a time when the IITs prided themselves in managing to draw the best from all corners of the country. But many now say the JEE has lost its mojo.

The gates that lead to an Indian Institute of Technology are narrow. One needs to elbow out at least 30 other IIT hopefuls to get beyond the entry point. It's carnage. And it's this that stokes the coaching industry. Few take the risk of not going through a gruelling long training.

This year, of the 13,195

who qualified for the IITs, two-thirds said they took professional help to prepare for the entrance — the Joint Entrance Exam.

In fact, some directors believe that this number is a conservative estimate and students who take coaching and join is much larger.

Analysis of JEE 2011 shows that of the 4.68 lakh candidates who appeared, 86,719 (18.5%) had completed schooling in an Indian village. Another 1.35 lakh (28.9%) schooled in towns and 2.46 lakh (52.55%) in cities. The success rate was the lowest for those who schooled in villages (9.84%); 25.12% of those from towns and 65.03% from cities made it to the IITs. Guwahati zone showed the largest percentage of candidates with schooling in villages while the Delhi zone had the largest success percentage from cities.

Most of those who made it were from CBSE schools, followed by those from state boards. Out of the 13,196 qualified candidates, 543 were from ICSE (4.11%), 7,396 from CBSE (56%), and 5,195 from state board (39.4%). In JEE 2010, among the qualified candidates 57.93% were from CBSE, 36% from state boards and 5.54% from ICSE.

Not so higher

India's higher education system needs better leadership

All global rankings are fraught. Much depends on the methodology used and assumptions made. Several world rankings put out by western outfits are based on western concepts that privilege them. Thus, it is not surprising that so many western institutions dominate the global top 200 universities worldwide. To take an example, the assessment of 'quality of research,' the citations index used and the definition of 'international outlook' of staff, students and research has a pro-western bias. It is not surprising that an analysis undertaken by UK's Times Higher Education would list 75 universities from the US and 32 from Britain in the top 200! The question could be raised why these countries are not doing as well as they used to despite having so many good institutions and how come China, Brazil and India are doing so much better with so few 'world class' educational institutions at the top. The question can also be asked if these lists are made to promote western, especially US and UK, institutions as destinations for bright young Asian students who are increasingly able to pay their way into high cost western institutions. Having entered all these caveats, it must still be recognized that the non-inclusion of a single Indian institution of higher learning – a university, an IIT or an IIM or other centres of higher education – in the world's top 200 institutions is a ringing indictment of the quality of higher education in India.

The quantitative growth of higher education in India, witnessed over the past decade – with more institutions, more seats, more posts and, above all, more funding, has not translated

into equal qualitative development. This despite the fact that India's equally poorly run schooling system produces hundreds of thousands of world class pupils every year and many of them go to the best institutions worldwide and do shine. Clearly, India's higher education needs a fix. It faces a huge leadership deficit with institutions unable to translate higher outlays into better outcomes. The deficit in leadership begins at the very top. For a prime minister who spent a part of his career as a university teacher and also chairman of the University Grants Commission (UGC), Manmohan Singh has not paid enough attention to improving the quality of leadership in higher education in India. He has increased public funding for education, legislated the Right to Education and facilitated increased private investment. A bill to allow foreign investment awaits parliamentary approval. But Dr Singh has shied away from being pro-active in improving the quality of political and administrative leadership in higher education. India has been damned by a succession of ideologically oriented or plain bureaucratic leadership in higher education. Seven years of Murali Manohar Joshi were followed by five years of the late Arjun Singh. Regrettably, incumbent Kapil Sibal has not been able to reverse the damage inflicted by them on the ministry, the UGC and the institutions. For nearly a year now Mr Sibal has doubled up as telecom minister and political firefighter, further neglecting his main turf. India desperately needs better academic, administrative and political leadership in higher education.

Financial Chronicle ND 10/10/2011

P-10

IIT-Kharagpur alumnus in US develops genNext chip

LALIT K JHA

Press Trust of India

INDIAN-AMERICAN Raj Dutt, an IIT-Kharagpur alumnus, has developed a next-generation energy-efficient computer chip that has caught the attention of the Pentagon, which is testing its application in the ambitious F-35 joint strike fighters.

The breakthrough technology by Dutt, Chairman and CEO of privately-held APIC Corp and Photonic Corp, helps computer processors consume up to 90 per cent less energy and run up to 60 per cent faster. "The significance of the technology is that information transfer on the semiconductor chip as well as between components, will now be done using light — photons, instead of just electrons (electron-

Photon power

- Raj Dutt's computer chip is being tested by Pentagon in the F-35 joint strike fighters
- It helps computer processors consume 90 per cent less energy and run 60 per cent faster
- Information transfer on the chip will be done using light or photons, instead of just electrons

ics)," California-based Dutt told PTI.

There are many advantages in size, weight and especially power consumed, he explained during his recent trip to Washington, where he met Finance Minister Pranab Mukherjee. Photons do not generate heat, thus they do not need to be

cooled. For electronics, cooling is one of the largest cost components. "Photonic interconnects do not generate heat and use less size than electronic copper interconnects, so more transistors can be put onto a chip. Most significantly, we have figured out how to do this using the same economical process used in manufacturing semiconductor chips today, enabling them to be stamped out by the millions," Dutt said.

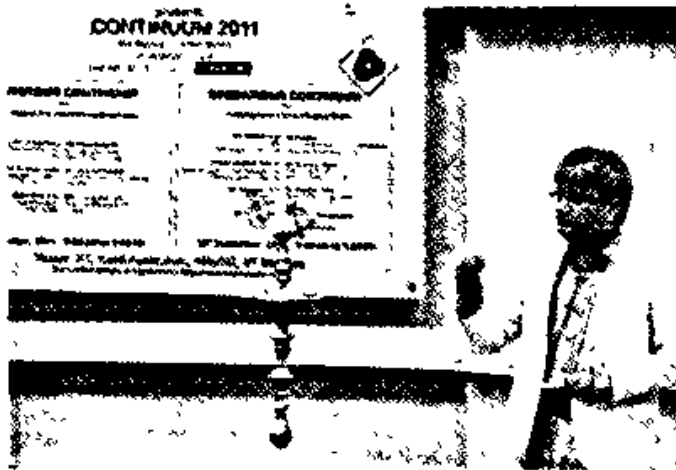
There are several benefits to the computer and defence industry, Dutt said. "First, for military platforms there are tremendous savings in size, weight and power required, while it simultaneously brings much more capability in bandwidth, processing power and speed," he said.

Financial Express, ND
10/10/2011 P-6

AT A GLANCE

Operations Continuum 2011 organised at SJMSOM, IIT Bombay

Operations Continuum, the rolling seminar series of the Shailesh J Mehta School of Management, IIT Bombay, was recently inaugurated by Prof Karuna Jain, HoD, SJMSOM. The theme of Operations Continuum 2011 was “Strategies for a Glocal Supply Chain”. Vikas Anand, COO,



DHL Supply Chain, spoke on “GST— Impact on Indian Supply Chain”. The next speaker was R Balaji, VP (Procurements & Contracts), RIL, who spoke on “SCM Challenges—Oil & Gas Industry in India”. Then, Tarun Mishra, Founder Director, Covacsis, gave an open talk on operations and SCM. Sukanta Padhy, Head Global Supply Chain, Alliance Tire Group, spoke on “Managing Risk in a Global Supply Chain”. Lastly, Dharmendra Gangrade, Head, Logistics, Pidilite Industries Ltd, spoke on “Supply Chain Collaboration”.

Perspectives

Building Indo-US Ties Through Education

The United States Education Trade Mission to India seeks to partner US and Indian schools



SURESH KUMAR

As I lead the first-ever US Department of Commerce Education Trade Mission to India this week, I am excited about the prospects of connecting Indian students to the 21 US colleges and universities with me on the mission. This trade mission will serve to strengthen US-India ties through increased trade and education, by helping develop skills and by enhancing career prospects of Indian students. Our mission will further strengthen the foundation of our already strong economic and commercial ties.

The United States is no stranger to Indian students and professionals. In 2010, more than half of all Indian students studying overseas chose US universities. India is now the second leading country of origin of students coming to study in the US, with a total student population of nearly 105,000 in 2010, and Indian students represent 15 percent of all international students in US universities.

I am confident that US-India education trade will continue

to grow to the mutual benefit of both our countries. Indian graduates of US higher education institutions have become CEOs of major banks, deans at major schools of business and engineering and played major roles in inventing new technologies. Many others have started well-known high technology companies in the US.

As a native of India, and having a family which has been educated in both countries, I understand the importance that Indian students, professionals and parents place on higher education. A multicultural education helps build careers, improves standards of living and provides knowledge-seekers with an

■
US President Barack Obama's visit to India last year, and his and Prime Minister Singh's goal to advance the US-India education partnership are indicators of our strong commitment to promoting mutual educational and economic cooperation

extra edge in today's competitive global economy.

US' 4,000-plus accredited institutions of higher learning can offer access to high-quality education across a broad range of fields. Employers in India have long stressed the importance of a workforce equipped with adequate

technical, interpersonal and communications skills, and higher education in the US provides this preparation.

There are countless examples of Indian students and professionals who, after studying in the US, have returned to India to invest in its economy. These include experts in high technology, engineering, medicine, business and many more professions. Many CEOs of major Indian corporations studied in or have a strong affiliation with US universities. JRD Tata and Anand Mahindra endowed Harvard University to help business and humanity programmes, and future generations of the KK Birla Group leadership were educated at Stanford and Dartmouth.

The US hosts 14 of the top 20 universities in the world, according to Times Higher Education, and according to the Institute of Higher Education there are 691,000 international students in American institutions, more than anywhere else.

Our 21 member delegation will participate in student recruitment fairs in New Delhi, Chennai and Mumbai, and meet Indian universities, private high schools, and Indian businesses – and their students and business professionals. This will be of great help to prospective Indian students in exploring the accredited academic curricu-

lums of all 21 US schools at a single venue.

The government of India aims to increase gross enrolment of high school graduates in higher education to 30% by 2020, almost tripling the present enrolment from 14 million to 40 million. Presently, the Indian population in the relevant age group enrolled in a higher education course is more than that of Europe, USA, and Australia combined. Higher education is an integral part of the strategic partnership between the US and India because of its impact on fostering collaboration on today's critical issues.

The US continues to invest in its strategic partnership with India: US Embassy consulate staffing increased by 60% in the last five years; more than \$100 million has been invested in updating and expanding US consular facilities in India; the US opened a Consulate General in Hyderabad in 2009, and plans are underway to open a new consulate in Mumbai. A streamlined US visa process and availability of generous financial aid offered by many US schools, especially to researchers and doctoral students, are added attractions.

The US Commercial Service, in addition to organising this trade mission, continues to work with more than 200 Indian schools, as well as partners

such as the US-India Educational Foundation (USIEF) to link Indian students to US academia. The US Commercial Service has a more extensive network of trade professionals in India, with presence in six cities, than in any other country. India is a priority market under the President Obama's National Export Initiative (NEI), which not only has the goal of doubling overall US exports by the end of 2014, but also of contributing to the economies of key US trading partners.

President Barack Obama's visit to India last year, and his and Prime Minister Manmohan Singh's goal to advance the US-India education partnership are indicators of our strong commitment to promoting mutual educational and economic cooperation. Concurrent with our trade mission is the US-India Higher Education Summit in Washington DC on October 13, chaired by Secretary of State Hillary Rodham Clinton and Minister of Human Resource Development Kapil Sibal. Our trade mission and this summit are concrete steps and important milestones that will set the stage for advancing mutual higher education initiatives.

(The author is Assistant Secretary for Trade Promotion and Director General of the US and Foreign Commercial Service at the US Department of Commerce)

Raymond Vickery and Karl F Inderfurth

US Secretary of State Hillary Clinton will meet human resource development minister Kapil Sibal at a 'Higher Education Summit' in Washington this week. The two countries have been cooperating in this sector since 2009 but the problem is that the two have not yet developed a single vision of their cooperation in higher education. The development of this vision is essential to the success of the upcoming summit.

India wants to increase its higher educational bandwidth in the country: new campuses with quality professors for teaching students. The US view seems largely focused on broadening educational and research exchanges and providing for knowledge transfer on the inputs needed for a vibrant higher education system. The Americans seem wary of bricks and mortar investments and are more interested in the education of Indians in the US and searching for additional opportunities for their faculties and students to partake of India's rich cultural and technical resources.

To an extent, the 2009 'Obama-Singh 21st Century Knowledge Initiative', hit the right note. Focused on junior faculty development,

A right step forward

In higher education, the US and India can complement each other

this initiative goes to the heart of the one resource most necessary to increase bandwidth: creative, competent faculty, an area of higher education in which the US excels.

However, the initiative, funded jointly at only \$10 million, cannot hope to fill the faculty gap.

Likewise, India's foreign education Bill, which was floated two years ago, was hailed by some as providing the means for increasing India's educational bandwidth by legitimising US and other foreign institutions involvement in higher education. But disappointingly, the Bill is yet to become an Act.

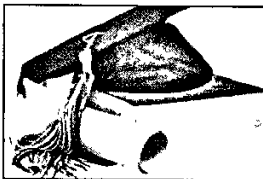
In reality, the US's support for the proposed Bill was based on a misconception that it would facilitate US institutional participation in Indian higher education. Actually, the proposed Bill

was designed to regulate foreign participation. The theory of the proposed legislation was that many Indians were being defrauded by foreign providers and deserved protection and recourse.

If passed, the Bill could have restricted not just the branch campuses, but also the widest possible array of existing exchange and joint programmes.

The Indian vision of increased higher educational bandwidth, in India for Indians as well as for

Americans, is the right vision. However, this vision cannot come about unless there is a sound economic basis for its implementation. This does not mean commercialisation of which many Indian commentators have expressed concern. It does mean that there must be development and rec-



■ A common vision

ognition of legitimate business models.

Advancing these US-India higher education business models should be a primary focus of the summit. Such models would include outlines of organisational structures, tax and regulatory requirements, and mutually beneficial capital flows. They would enable US institutions to participate confidently in the development of India's higher education system. Without the development of a common vision that provides confidence to US and Indian institutions, US-India higher education cooperation will never achieve its full potential.

Increasing India's educational bandwidth while providing benefits to US institutions is a vision that could produce dividends for both. The summit is an opportunity to develop and implement this vision.

Raymond Vickery is senior director of Albright Stonebridge Group, Of Council at Hogan Lovells, and former US Assistant Secretary of Commerce for Trade

and Development

Karl F Inderfurth holds the Wadwani Chair for US-India Policy Studies at the Center for Strategic and International Studies and is a former US assistant secretary of state for South Asia affairs

The views expressed by the authors are personal

New vocational policy to allow easy entry, exit

IN EDUCATION If implemented, students will be able to get graduation degree while they work

HT Correspondent

■ letters@hindustantimes.com

TO BE NOTED

NEW DELHI: The HRD ministry is working on a new vocational education framework that will allow students to get graduation level degree with easy entry and exit provisions enabling education with work.

The ministry had unveiled the National Vocational Education Qualification Framework (NVEQF), seeking to create a pool of skilled workforce for the country through a national vocational university having regional centres to implement the programme.

In it, the All India Council for Technical Education has identified seven certification levels of knowledge and skill with first four levels equivalent to class IX to XII of school education. These levels will be attained through Central Board for Secondary Education schools or schools affiliated to state boards, a ministry's statement said.

The three and five levels would of the college and university and those completing all seven levels will get a degree in

■ The proposed system, which will become operational from 2012, seeks to establish a National Vocational Education and Training Institute to supplement the role of the proposed university

■ The university will decide the free structure, monitor knowledge delivery and

evaluation methodologies of training providers

■ Through this programme the government aims to empower 200 million students, including dropouts by 2011 and to secure career opportunities to about 150 million students who may not have access to higher education by 2020.

vocational education.

In each level, a student will have to complete 1,000 hours of education and training every year.

"The skill modules or the vocational content at a certification level could be a single skill or a group of skills of the no of hours prescribed," the statement said.

The students will have freedom to choose either from a vocational or a conventional stream to reach graduation level. It has also been proposed that a student will have freedom to move from vocational stream to current formal higher edu-

cation stream or vice versa at various stages.

"The multi-level entry and exit system shall allow a student to seek employment after any level and flexibility to rejoin the education as and when feasible to upgrade qualification or skill competency," the ministry said.

The students would be able to seek employment after clearing class XII level of certification.

The proposed system to be operationalised from 2012 seeks to establish a National Vocational Education and Training Institute to supplement the role of the proposed university.

Times of India ND 10/10/2011

P-19

PC chip that saves energy, is 60% faster

Washington: Indian-American Raj Dutt, an IIT-Kharagpur alumnus, has developed a next-generation energy-efficient computer chip that has caught the attention of the Pentagon, which is testing its application in the ambitious F-35 Joint Strike Fighters.

The breakthrough technology by Dutt, chairman and CEO of privately-held APIC Corp and Photonic Corp, helps computer processors consume up to 90% less energy and run up to 60% faster.

"The significance of the technology is that information transfer on the semiconductor chip as well as between components, will now be done using light — photons — instead of just electrons (electronics)," Dutt said.

There are many advantages in size, weight and especially power consumed, he explained during his recent trip to Washington. Photons do not generate heat, thus they do not need to be cooled. For electronics, cooling is one of the largest cost components.

"Photonic interconnects do not generate heat and use less size than electronic copper interconnects, so more transistors can be put onto a chip. Most significantly, we have figured out how to do this using the same economical process used in manufacturing semiconductor chips today, enabling them to be



FAST AND FURIOUS: Raj Dutt shows the GenX computer chip

stamped out by the millions," Dutt said. Well aware with the potential of the computer chip, the US department of defence is fully supporting Dutt and his company. The Pentagon is testing the chip's application in the ambitious F-35 Joint Strike Fighters.

There are several benefits to the computer and defence industry, Dutt said. "First, for military platforms there are tremendous savings in size, weight and power required, while it simultaneously brings much more capability in bandwidth, processing power and speed," he said. Now, tens or even hundreds of separate signals (frequencies) can be passed through a single fiber optic cable less than a 10th of the diameter of a human hair, rather than one signal through a copper cable, he said. ■

Indian Express, ND 10/10/2011 P-12

Pentagon to test Indian's next-gen chip

LALIT K JHA

WASHINGTON, OCTOBER 9

RAJ DUTT, an Indian-American, IIT-Kharagpur alumnus, has developed a next-generation energy-efficient computer chip that has caught the attention of the Pentagon, which is testing its application in the ambitious F-35 Joint Strike Fighters.

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The Pioneer ND 10/10/2011 P-10

Aakash production cost less than \$35, Govt buying at \$49

NEW DELHI: A dream project of the Government, the 'world's cheapest tablet PC', Aakash, is being produced at less than \$35 (approximately ₹1,750) per unit, but the replacement warranty attached to it has led to an increase in its price by about \$14 to \$49.98 per piece.

"The Government has asked for a special replacement warranty. Government has asked us not to repair it (Aakash Tablet)... You will have to replace it... Which is a big cost," Suneet Singh Tuli, the CEO of Datawind, the company manufacturing the tablet, told the news agency.

Tuli further explained that the ratio of defects in any device sold in India is higher when compared to America because of the harsh climatic conditions here.

"Those kind of costs add to it. This (Aakash) is Rs 2,200... It can be ₹1,700. Actual manufacturing cost still is less than ₹1,750. But there are all these other conditions which take it above ₹1,750," he said.

On July 22, 2010, HRD

Minister Kapil Sibal had unveiled a prototype of the device and announced that it would be developed for use at around \$35 per unit.

To ensure complete transparency and a level playing-field, the National Mission on Education through Information and Communication Technology (NME-ICT) decided to task IIT Rajasthan, Jodhpur, with the job of procuring and testing these devices, based on the design and specifications that the mission's team had finalised.

IIT Jodhpur had floated tenders and the lowest bidder quoted an ex-factory price of \$37.98, which was close to the cost mentioned by the minister.

This cost comprised components and material, as well as manufacturing expenses. The final landed price of \$49.98 (₹2,276) per unit included taxes, levies, and charges like freight and insurance, servicing and documentation, etc.

Tuli said people have been



The Government has asked for a special replacement warranty. Government has asked us not to repair it (Aakash Tablet). You will have to replace it which is a big cost

Datawind CEO Suneet Singh Tuli

challenging the development of such a low cost device, but by selling this device to the Government, Datawind is making enough profits, which even allows him to donate 10 per cent of the total profit to charity.

Tuli said that over-and-above the production cost,

Datawind pays almost 20 per cent as taxes, which add to the cost of the device.

"If we bring it after making in China, then there would have been no issues, because it's exempted from duties. I would have not been required to pay 4 per cent VAT (value added tax). Getting it from China and selling in India would have not make it exciting. Therefore, we made it at Hyderabad," Tuli said. He said that company will sell the commercial version of Aakash in the market for Rs 2,999, which -- unlike the government's Aakash tablet with a 1-year replacement warranty -- will carry only a 30-day replacement warranty.

Tuli has said that he will sell the Government Aakash tablets for ₹1,750 if the Government orders 10 lakh units. At present, Datawind has an order for supplying 1 lakh units to the Government.

The Government is buying the tablets for ₹2,276 per unit and giving them to education institutes at a 50 per cent subsidy.

PTI

Indian Group's London B-School Shuts Shop

TASMAC's sudden closure leaves 550 students in a lurch

SUDESHNA SEN & GOURI AGTEY ATHALE
LONDON|PUNE

When students and staff of TASMAC London School of Business, run by Pune-based TASMAC group, showed up on campus on Friday morning, they were expecting their first semester results. Instead they found themselves locked out and bailiffs and lawyers in possession of the property.

A terse message in their inboxes said TASMAC London had ceased operations because of a change in UK visa regulations. "We regret to inform you that TASMAC London has had to cease its operations with immediate effect. Almost all of TASMAC London students originate from non-European Union countries and they need visas to study at the school. The United Kingdom Borders Agency (UKBA) has drastically changed its regulations and this has impacted TASMAC London badly; as a consequence, TASMAC London cannot continue to run its operations any longer."

The last time the UKBA changed its rules was in April 2011.

Not surprisingly, students and employees are livid. Over 550 students are still to finish their course, and staff have been suddenly rendered unemployed. Students, who had paid up their full fees for an MBA from the University of Wales in TASMAC London, suddenly find themselves in a limbo, their visa status in question, and no clarity on their future.

The Pune-based company runs three

business schools in India in Pune, Bangalore and Kolkata, and lists names like Lila Poonawala and PC Shejwalkar of Pune University on its board of advisors.

Sameer Dua, joint managing director, TASMAC India and TASMAC London, told ET that the London operations had to be closed after an attempt to induct an investor failed. "We were working towards hiving off the TASMAC London institutes, for which we signed an MoU with this large Indian institute which wanted a UK presence.

In the first week of June, they carried out a due diligence and after they saw the impact of the changed UKBA regulations and how they affect the sustainability of operations, they developed cold feet and told us they would not be able to go through. That was in the last week of September, after which we informed the liquidators, who have begun the process."

Dua insisted students will be placed in institutes affiliated with the University of Wales. "On Monday, a meeting will be held among the 550 students who have still to complete their course, the University of Wales and their affiliated institutes who will take in these students."

TASMAC, in London and in India, offers courses validated by the University of Wales.

Students Distraught, Faculty Livid ►► 18

Students Distraught, Faculty Livid

►► From Page 1

The university will transfer the students to other courses, as well as arrange institutes to take over as visa sponsors, according to the notification issued to the students. In response to a query, the UKBA press office pointed out that the guidelines say students who change education sponsors midway will have to re-apply for their visas, but can stay and start their new course before the application is processed provided the new institute has an

HTS status. It is not yet clear which institutes the students will be sent to.

The prospects of students

being transferred to other institutes is no solace, since they have no idea which institutes are likely to accept them or what will happen to the fees they have paid up front, or where these institutes are located.

Unsurprisingly, the students are distraught. Satish Gupta, who mortgaged his home and gave up a job in Bangalore to pay the over £6,000 fees to get his MBA, is desperate: "The directors have all just disappeared. We can't reach them. Now, we don't know what to do."

Till Sunday midday, there was no communication from the directors on the school's website or social networking sites, and students say anguished emails went unanswered.

Kailash Deoli from Dehra Dun asks, "We're told another institute is going to take us - but what if that also closes down? We don't know what will happen to us."

How the dismal science stopped being dismal

BOOK REVIEW
JUSTIN FOX

LISTEN to the economic debates of the past couple of years, and it's tempting to conclude that no progress has been made in the field in over half a century. There's John Maynard Keynes on the one side, arguing for deficit spending to offset the aftereffects of a once-in-a-lifetime financial crisis. On the other side there's Ludwig von Mises (his fellow Austrians Joseph Schumpeter and Friedrich von Hayek seem too moderate for the role), thundering that all government intervention in the economy is doomed to failure. Keynes and Mises are of course both long dead. But it is the resilience of their ideas that makes studying the history of

economics so rewarding for non-economists. As a rule, economists don't know much about history. So at times like these, anyone with a bit of familiarity with the giants of the past can weigh in on big economic issues with about as much authority and credibility as the credentialed experts. This is one explanation for the continuing popularity of Robert L. Heilbroner's book *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers*. That once a book makes its way onto undergraduate required-reading lists, as Heilbroner's did, it doesn't easily fall off. That kind of success makes a tempting target for imitators, and over the past decade, word spread among economics writers that Sylvia Nasar was at work on a new "Worldly Philosophers"—something to update and possibly supplant Heilbroner. Nasar is no knockoff artist; a professor at Columbia Journalism School and

a former economics correspondent for *The New York Times*, she wrote what is perhaps the best economics-related book of the past quarter-century, *A Beautiful Mind*, a near-perfect biography of the game theorist John Nash. Now Nasar's new book is here. As it turns out, it isn't really a Heilbroner update. For one, it doesn't make much chronological headway: the postwar giants Paul Samuelson and Milton Friedman get a few pages, as does the philosopher and development economist Amartya Sen, who is still alive and writing books. But the major developments of post-1950 economics are for the most part ignored. So, for that matter, are the major developments of pre-1850 economics. At the core of Nasar's narrative is an account of the economically troubled decades between the two world wars, as told through the experiences of Keynes, Irving Fisher, and Schumpeter and Hayek. The

least well known of this lot is Fisher, a Yale professor best remembered today for his insistence in 1929 that stock prices were perched upon a "permanently high plateau". He was also the founder of modern monetary economics (his adherents include Milton Friedman and Ben Bernanke) and for a time a successful entrepreneur (he invented and commercialised a precursor to the Rolodex). Fisher believed that free markets were prerequisites for prosperity, but that their functioning could be improved with government action, mainly monetary policy by central banks. Keynes, himself a successful speculator and investor, held similar beliefs but came to espouse more aggressive government action than Fisher. Which leaves Schumpeter and Hayek. In modern political shorthand, they were champions of free enterprise, their ideas

wielded in opposition to those of the socialist Keynes. The two men's views were shaped in Vienna in the terrible years after the end of World War I and the fall of the Austro-Hungarian Empire. Schumpeter did a stint as finance minister in a socialist government in 1919, an episode in his life that is usually treated as a joke, but Nasar renders it as a densely detailed tragedy. Schumpeter had a sensible plan for addressing Austria's ills, but no politician would go for it, and he was thrown out of government after seven months. Hayek spent part of the 1920s chronicling his country's travails at an economic-forecasting institute (founded by his mentor Mises). By the time the two made their way west in the early 1930s—Schumpeter to Harvard, Hayek to the London School of Economics—they had become understandably critical of the notion that politicians could easily fix what ailed the economy.

But they weren't so sure that economists couldn't come up with solutions. Schumpeter was mentor at Harvard to Samuelson, who became a great expositor of Keynes's ideas, while Hayek befriended Keynes and in Nasar's telling had come around by the 1940s to embracing at least a few Keynesian prescriptions. The epic of intellectual progress Nasar wants to tell is not an unmitigated success. It doesn't entirely square with the facts she so ably digs up. And her last few chapters offer not a rousing finale, but a muddled letdown. Still, the book as a whole is made up of so many wonderful parts that one is inclined to excuse its shortcomings. In the end, the economists whose lives Nasar describes are depicted as one more or less happy family, advocates of an economy with free enterprise and free markets at its core, but a significant amount of government meddling to make things work better. In fact there was such a synthesis, its details hammered together by Samuelson, who gets a chapter

late in the book but still feels underdescribed, and by a host of other young economists who go unmentioned. Within a few decades that synthesis began to disintegrate, leaving us with the debates we witness today. That, however, is another story. Nasar writes that since 1950 we have enjoyed an age of global prosperity that even the Great Recession has been unable to derail. A permanently high plateau of prosperity, you might say. There's something unnerving about such confidence. But you don't have to share it in order to appreciate this rich, in places dazzling, history. Justin Fox, the author of *The Myth of the Rational Market*, is editorial director of the Harvard Business Review Group. ©2011 The New York Times News Service

GRAND PURSUIT
The Story of Economic Genius
Sylvia Nasar
Simon & Schuster
558 pages; \$35

Financial Express, ND 10/10/2011 P-4

FE Labs

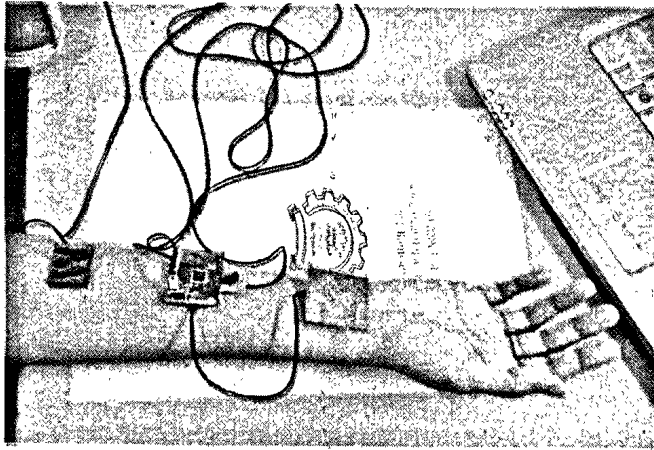
REDEFINING POSSIBILITIES

Power-packed study: Turning cloth into a body sensor

Ever been bothered by clingy clothes charged with static electricity? Most of us would be thankful that it's a temporary phenomena, but that bristling of cloth could be more useful than we know. A group of researchers from the Indian Institutes of Technology (IITs) at Bombay and Hyderabad have created an intelligent textile sensor by tweaking the yarn's manufacturing process, so that it retains that bothersome static cling permanently. The first-of-its-kind textile, they say, could potentially be fashioned into clothing that could measure a pulse artery or ECG or EEG pulses, simply because it conducts electricity.

Static electricity induces synthetic textiles to go into a temporary unstable state, allowing them to conduct electricity. "It becomes like a metal, which is, basically, in the form of a textile. But you just experience it for a few seconds and, then, it goes away. Now, what we have done with this material, the thermally unstable partially oriented yarn, is to try to capture this essence in a permanent state," says Sunil Karamchandani, a researcher at IIT-Bombay's SPANN lab. Karamchandani's paper on "Thermally unstable intelligent polymer textile biosensors" was published by the journal 'Sensors and Actuators' in February. He co-authored the paper with fellow SPANN researcher H D Mustafa, the head of IITB's electrical engineering department, S N Merchant, and IIT Hyderabad director UB Desai. The researchers used a retardant they had developed to arrest the manufacturing process of the polymer textile at a particular stage, so that it remains in an unstable state permanently. In the regular manufacturing process, the textile eventually settles down at a stage where it is stable.

"Basically, you have a textile material, which has the properties of the textile, like it looks and appears like a cloth, and it also has properties like a metal," says Karamchandani. "This gives the substance a threshold that acts like a gate. So, it can be modelled as a transistor, having the processing ability of a 'yes' or a 'no'. That is what we are exploring currently," says



Researchers say the idea of exploring whether the 'thermally unstable partially oriented yarn' (tuPOY) sensor could behave like a transistor is still an early thought

Karamchandani. A transistor, which helps amplify and switch electronic signals, is the basic ingredient in most electronic devices. When they first manufactured the 'thermally unstable partially oriented yarn', or tuPOY, the team tested it as a sensor in an ongoing project in the field of body area networks for continuous monitoring of diseases. It was tested on around 5,000 people in a project conducted jointly with Bhabha Atomic Research Centre, Mumbai, with the sensor in the form of a patch that was pressed against their bodies. Body area networks pertain to wearable computing devices that allow wireless communication. "We tested it on those subjects and we found a classification of the radial pulse into eight different kinds of wave forms, which could be correlated to some of the diseases of the liver, heart," says Karamchandani, explaining that a movement of electrons takes place in the lattice of the unstable material when any external energy or a pulse rate strikes it as the material tries to reach the stable state that it was prevented from during manufacture. "But the retardant, on the other hand, will oppose the reaching of that state. So, now this energy is basically correlated to the waveform." Using the tuPOY sensor, the study continuously monitored the vital signs of the subjects with a healthcare provider they had signed up. Each waveform striking the sensor will create

a particular amount of energy and the researchers have correlated eight different patterns in the body. "When, for example, 250 Joules is created from a particular subject, we know which waveform that energy correlates to. So, that helps us with the calibration." The researchers say their case study for the radial pulse analysis can be replicated for any of the other waveforms of the human body and can possibly be used in different applications. Developing an application might still be some way off, however. "This is very nascent. You are creating a fabric which has transmit capabilities. A lot of more research will be required to create an application," said UB Desai, director of IIT Hyderabad and one of the co-authors. "As far as the knowledge is concerned, it is the first of its kind." Desai adds that the idea of exploring whether the tuPOY sensor could behave like a transistor is still an early thought. Unlike organic polymers, textile sensors eliminate the need for carbon nano tubes as actuators and are more stable and durable, the researchers say, adding that the energy from the tuPOY sensor and body heat could serve as a power source in applications, such as body area networks. They also report that their sensor may be suitable for logic applications, as it overcomes the limitations of carbon nanotubes and graphene by setting its own inherent threshold. — Ajay Sukumaran

EXPERTSPEAK

SUNIL KARAMCHANDANI, Researcher, IIT-Bombay's SPANN lab



Basically, you have a textile material, which has the properties of the textile; it looks and appears like a cloth and it also has properties of a metal. So, now, it can be modelled as a transistor, having the processing ability of a 'yes' or a 'no'. That is what we are exploring currently

UB DESAI, Director, IIT-Hyderabad



As far as the knowledge is concerned, it is the first of its kind. You are creating a fabric which has transmit capabilities. A lot of more research will be required to create an application

STATFACTS

NOT JUST SPINNING A YARN



- Static electricity induces synthetic textiles to go into a temporary unstable state, allowing them to conduct electricity
- The researchers used a retardant they had developed to arrest the manufacturing process of the polymer textile at a particular stage, so that it remains in an unstable state permanently
- When they first manufactured the 'thermally unstable partially oriented yarn', or tuPOY, the team tested it as a sensor in an ongoing project in the field of body area networks for continuous monitoring of diseases
- Each waveform striking the sensor will create a particular amount of energy and the researchers have correlated eight different patterns in the body
- Their sensor may be suitable for logic applications, as it overcomes the limitations of carbon nanotubes and graphene by setting its own inherent threshold.

Financial Express, ND 10/10/2011 P-6

School education must be made stronger

CV Kalyan Kumar

RECENTLY the co-founder of Infosys, NR Narayana Murthy, said that the quality of education in the IITs is getting worse. Why were the students coming out of IITs a decade ago better than the current lot? Because the selection process then was more rigorous, the questions were more into analysing a student's thinking skills and IQ. The questions were of subjective nature that helps in two ways: (1) No student can guess the answer or use shortcuts to arrive at the answer, and (2) a student's thought process can be analysed by seeing his/her solution. Even if a student makes a silly mistake, marks could still be awarded for the approach and the technique used. In the current

system of objective-based testing, the level of questions has gone down and if a student makes one small error he/she is penalised with negative marks. And the new concept of doing away with a subject-based entrance test for IITs and basing it all on school percentage will further bring down the quality of students.

Coaching institutes are not responsible for the poor quality of students. If the selection process were tough, rigorous and foolproof, how can coaching institutes enable an unintelligent student to succeed? And if coaching has to be curbed then school education must be made stronger. If schools fail to do their job there will always be someone waiting to fill the void.

The writer is director, FIITJEE

Publication: The Times Of India Delhi; Date: Oct 10, 2011; Section: Times Nation; Page: 12;

Booming economy: India Inc expats' hiring up 20% this year

Mumbai: With hiring activities in most Western economies in deep freeze, more and more foreigners, mostly from the US and Europe, are looking at India for jobs, a trend that has resulted in an up to 20% jump in expat hiring this year, according to headhunters.

According to industry estimates, there are as many as 40,000 expats working in various industries across the country today.

"Hiring of expats has picked up by 15-20% at all levels since last year, mainly on account of India being one of the fastest growing economies, offering huge job opportunities," recruitment process outsourcing firm Elixir's consulting manager for international practices, Ratnesh Kumar said.

An increasing number of expats are seeking jobs in the country on account of job cuts in their home countries, coupled with

rising outsourcing and high taxes, he said, adding that this was happening more in the US and Europe.

The Indian experience also adds value to the expats' resume, reflecting an individual's ability to adapt and deal with diversity, he explained. These professionals are mainly being hired in the banking and financial services, automobile, pharma and retail sectors, apart from areas where the domestic industry does not have competencies, like alternative energy, the complex infrastructure sector, etc, he said.

"While CXOs are generally offered around \$2,50,000 per annum, mid-manager level employees get \$80,000-1.25,000 per annum," he said. The number of foreigners seeking jobs in the country are no longer limited to the middle and senior levels, but is spreading over to beginners as well, he said,



INCREDIBLE INDIA

adding that at present, there were around 40,000 expats working in the country and the number was still growing.

What is interesting is that these expats are given compensation almost at par with

what is being paid in foreign countries.

"Expats, with specialized skill sets, which are not available in the country due to financial or technology constraints, such as molecular research, are being offered highly attractive packages," Kumar said. Companies are also offering attractive leadership positions to experienced expatriates, ranging from mid-level managerial roles to departmental heads.

However, the attrition rate of expats is around 10% annually, mainly due to difficulties in communication and cultural differences, Kumar added.

Echoing a similar view, Globalhunt Director Sunil Goel said some global companies have their largest centres in the country on one hand, while on the other, many local organizations are also going global. "So expat hiring is becoming the need of the

hour, where foreigners from various parts of the globe are taking up multiple roles and are recruited as experts in sectors like infrastructure, healthcare, power and energy, oil and gas and automotive," he said.

According to TeamLease Vice-President Rituparna Chakraborty, the country has seen increased demand for expats across various industries, especially following the 2008 recession in developed economies. "Professionals from Europe, South-East Asia and the US mostly are being hired, mainly by sectors like travel and tourism, retail, aviation, education and sports, where we see maximum traction," she said. Talking about salaries, she said, for most levels, it is on a par with industry standards, unless they are being brought in for a particular skill that is niche and non-existent within the country. ■

Publication: The Times Of India Delhi; Date: Oct 10, 2011; Section: Times Nation; Page: 14;

Indians to build world's largest fridge for reactor

New Delhi: Indian engineers will fabricate the world's largest high-vacuum cold storage vessel for an ambitious international project to generate energy from a process that powers the sun. The vessel called the cryostat will be home to the international thermomuclear experimental reactor, the largest and the most advanced facility of its kind being built in Cadarache, France.

Scientists and engineers at the Institute of Plasma Research (IPR), Gandhinagar will manufacture this mammoth cryostat in segments at a cost of 100 million euros and ship it to France for being assembled at the site. India is part of a seven nation consortium that is building the fusion reactor designed to produce 500 MW of output electricity with a power input of 50 MW. ITER-India Project, a part of the IPR — an autonomous unit of the Department of Atomic Energy, will make the 'in-kind' contributions that form India's share to the ITER project. The procurement arrangement for the cryostat was signed recently by ITER-India. ■

Publication: The Times Of India Delhi;Date: Oct 10, 2011;Section: International;Page: 19;

Gamma-ray bursts may end life on Earth

London:Gamma-raybursts, massive explosions on the other side of the galaxy, could end life on Earth, say planetaryscientists.

A new theory claims that the explosions, thought to occur when two stars collide, releases tons of high-energy gamma-ray radiation into space, finally leading to the end of life on planet Earth.

The scientists have already found that such blasts are contributing to the depletion of the Earth's ozone layer. Now, they are beginning to connect the timing of these gamma-ray bursts to extinctions on Earth that can be dated through the fossilrecord.

"We find that a kind of gamma-ray burst — a short gamma-ray burst — is proba-

bly more significant than a longer gamma-ray burst," lead researcher Brian Thomas of Washburn University said. He added: "The duration is not as important as the amount of radiation."

It is thought to be the first time scientists have connected the timing of gamma-ray

APOCALYPSE NOW?

bursts to extinctions on Earth. There are two types of gamma-ray bursts — a longer, brighter burst and a "short-hard" burst, which lasts less than a second but seems to give off more radiation than a longer burst.

If a burst were to happen inside Milky Way, its effects on Earth would be much longer lasting. The researchers estimated such collisions happen about once every 100 million years in a galaxy.

Publication: The Times Of India Delhi;Date: Oct 10, 2011;Section: Education Times;Page: 46;



INNOVATION INSTITUTE

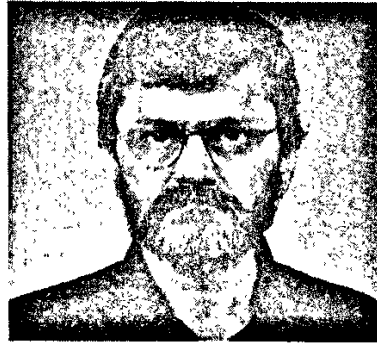
David Naylor, president, University of Toronto, launched the India Innovation Insti-

tute on October 5 at the Munk School of Global Affairs, Trinity College. The institute is a multidisciplinary hub for learners.

सवाल-जवाब प्रो. उदय बी देसाई, निदेशक, आईआईटी, हैदराबाद

स्थानीय उद्योगों से बेहतर संबंध पर है हमारा जोर

2008 में शुरू हुए दूसरी पीढ़ी के संस्थानों में से एक है हैदराबाद का भारतीय प्रौद्योगिकी संस्थान (आईआईटी)। शहर से लगभग 45 किलोमीटर दूर मेडक की आयुधशाला के परिसर से काम चला रहे संस्थान के लिए 580 एकड़ के स्थायी परिसर का निर्माण 2013 तक पूरा हो जाने की उम्मीद है। प्रस्तुत है संस्थान के निदेशक प्रोफेसर उदय बी देसाई के साथ बी रामकृष्ण की बातचीत:



नए आईआईटी के प्रमुख के नाते संस्थान के लिए आपकी क्या योजनाएं हैं?

हमारा ध्यान शोध की ओर होगा जिसके लिए आईआईटी जैसे संस्थान जाने जाते हैं और शिक्षा की गुणवत्ता को बेहतर बनाना तो हमारा स्वाभाविक लक्ष्य है। दूसरा महत्वपूर्ण लक्ष्य बड़े स्तर पर काम करने का है। हम लगभग 20,000 छात्रों का लक्ष्य लेकर चल रहे हैं। इनमें से आधे स्नातक के छात्र होंगे जबकि बाकी स्नातकोत्तर और पीएचडी और उसके आगे की पढ़ाई करने छात्र होंगे। देश के दूसरे स्थापित आईआईटी में 7000-8000 छात्र पढ़ते हैं।

आप आईआईटी के महत्त्व को किस तरह देखते हैं? जैसा पंडित नेहरू ने कहा था कि आईआईटी समाज से जुड़ी तकनीक पैदा करने की मशीन जैसी है या सिर्फ मौजूदा अर्थव्यवस्था के लिए काबिल लोगों की जरूरत को पूरा करने की मशीन है?

जो नेहरू ने कहा वह तो बिल्कुल सही बात है। बौद्धिक संपत्ति के उत्पादन के क्षेत्र में हमें नेतृत्व करने की भूमिका में होना चाहिए। हम कब तक विदेशों बौद्धिक संपत्ति पर भरोसा कर सकते हैं। अब समय आ गया है कि हम खुद बौद्धिक संपत्ति के विकास के बारे में विचार करें। देश भर के आईआईटी संस्थानों में ऐसी शुरूआत की जा चुकी है। हमारे पास शोध और विकास से जुड़े कई प्रस्ताव हैं जहां हम बौद्धिक संपत्ति का विकास कर रहे हैं। लेकिन इस बात को भी नकारा नहीं जा सकता है कि अर्थव्यवस्था में काबिल लोगों की जरूरत को भी पूरा करना भी हमारी जिम्मेदारी है। देश में तकनीक दक्ष लोगों की बहुत जरूरत है। यही कारण है कि हम 20,000 छात्रों की बात कर रहे हैं। हम एक रिसर्च पार्क शुरू करने के बारे में विचार कर रहे हैं।

शिक्षकों के साथ क्या छात्रों को भी उद्योगों के संपर्क में आने का मौका मिलेगा?

जी, हां। इस दिशा में हमने एक महत्वपूर्ण कदम उठाया है। छात्रों के लिए हमने मानक 3 क्रेडिट कोर्स की जगह 2.5, 2 या 1.5 क्रेडिट के नए कोर्सों की शुरूआत की है। इसका मतलब यह है कि कुछ

कोर्सों की पढ़ाई उद्योग विशेषज्ञों द्वारा कराई जाएगी। उन विशेषज्ञों के पास पूरी पढ़ाई कराने के लिए पर्याप्त समय नहीं होता है। आम तौर पर 3 क्रेडिट वाले कोर्स में 42 लेक्चर होते हैं। ऐसे में यह 7-8 लेक्चर का कोर्स होगा।

ज्यादातर आईआईटी स्नातक इन दिनों प्रबंधन की दिशा में अपना कैरियर बना रहे हैं। इस बारे में आप क्या कहेंगे?

हां, यह बिल्कुल सच है। यहां छात्र 17 साल की उम्र में आते हैं। उनसे बाकी पूरा जीवन इसी क्षेत्र में बिताने की उम्मीद करना ठीक बात नहीं होगी। हम यहां छात्रों को इंजीनियरिंग के सहारे दुनिया की चुनौतियों का सामना करना सीखाते हैं। अगर किसी को लगता है कि वह किसी और क्षेत्र में बेहतर काम कर सकता है तो मुझे इस बात से कोई समस्या नहीं है।

क्या आईआईटी में शिक्षकों की गुणवत्ता एक मुद्दा है?

यह कोई विशेष मुद्दा तो नहीं है। इसके लिए हम बहुत सारे प्रयास कर चुके हैं। दो सालों के दौरान मैंने चयन समिति की चार चरणों की प्रक्रिया से होकर गुजरा हूँ। हमारे हैदराबाद जैसी जगह पर होने का हमें निश्चित रूप से फायदा मिला। शहर में डीआरडीएल लैब, सीएसआईआर लैब, डीएसटी और डीआईटी लैब के होने की वजह से लोग इस शहर को अंतिम गंतव्य की तरह देखते हैं। इससे बड़ा फर्क पड़ता है।

अभी हाल में देश आईआईटी संस्थानों में शिक्षकों की गुणवत्ता को लेकर एक बड़ी बहस चल रही थी। कृपया टिप्पणी कीजिए।

यह बात कुछ हद तक सही है। हम शोध के काम में लगे हुए हैं लेकिन अभी हमें लंबा रास्ता तय करना है। मौजूदा समय में शोध के क्षेत्र में हमारी उत्पादकता बढ़ रही है। लेकिन हमें इस बात का भी खयाल रखना चाहिए कि हम मैसाच्युसेट्स इंस्टीट्यूट ऑफ टेक्नोलॉजी की बराबरी नहीं कर सकते। हम उनकी तरह बनना चाहते हैं लेकिन अभी इस बात में समय लगेगा।

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इंडो-अमेरिकन की बनाई चिप पर पेंटागन फिदा

पीटीआई ॥ वॉशिंगटन

भारतीय-अमेरिकी राज दत्त की वॉशिंगटन में इन दिनों धूम मची हुई है। हाल ही में उन्होंने नेक्स्ट जेनरेशन कंप्यूटर चिप बनाई, जिसमें पेंटागन दिलचस्पी दिखा रहा है। इस कंप्यूटर चिप को पेंटागन अपने एफ-35 जॉइंट स्ट्राइक फाइटर प्लेन में इस्तेमाल करने की सोच रहा है। फिलहाल इसका टेस्ट चल रहा है। चिप की खासियत है इसका बिजली की बचत करना।

आईआईटी खड़गपुर के राज दत्त एपिक कॉर्प और फोटोनिक कॉर्प कंपनियों के चेयरमैन और सीईओ हैं। इस चिप तकनीक के जरिए कंप्यूटर प्रोसेसरों की बिजली की खपत न सिर्फ 90 पसैंट तक कम हो गई है, बल्कि ये पहले के मुकाबले 60 पसैंट ज्यादा तेज चलने लगे हैं। कैलिफॉर्निया में रहने वाले दत्त बताते हैं कि सेमीकंडक्टर चिप के बीच होने वाला डेटा ट्रांसफर इलेक्ट्रॉन्स की मदद से होता है। अब यह फोटॉन्स से होगा, जो लाइट होता है। साइज और वजन में हल्की चिप बिजली की खपत कम करती है, क्योंकि फोटॉन्स हीट जेनरेट नहीं करते और इसलिए इन्हें ठंडा करने की जरूरत नहीं

होती। इलेक्ट्रॉनिक्स में कूलिंग करने में सबसे ज्यादा लागत आती है। इस चिप का महत्व अमेरिकी रक्षा विभाग बखूबी समझ रहा है। एफ-35 लडाकू विमानों में इस्तेमाल के लिए इस चिप का टेस्ट किया जा रहा है। दत्त के मुताबिक, यह बैंडविड्थ की क्षमता बढ़ाएगी, जिससे प्रोसेसिंग पावर और स्पीड भी बढ़ेगी। अगर किसी एयरक्राफ्ट से वजन कम हो जाए तो उसे फायदा ही मिलेगा। अब कॉपर केबल के बजाय फायबर ऑप्टिक से सिग्नल ट्रांसफर होंगे जो मनुष्य के बाल से भी पतला होता है। दत्त इस तकनीक को भारत लाना चाहते हैं। उन्होंने



राज दत्त की चिप से बिजली की खपत हो गई है कम

हाल में वित्त मंत्री प्रणव मुखर्जी समेत कई बड़े नेताओं से मुलाकात की।

बिज़नेस स्टैंडर्ड

वर्ष 4 अंक 202

उच्च शिक्षा में उच्च नेतृत्व

सभी वैश्विक रैंकिंग पूर्वाग्रह से प्रसिद्ध होती हैं। क़ाफ़ी कुछ धारणा और उनके तौर तरीक़ों से तय होता है। कई वैश्विक रैंकिंग परिचमो संस्थानों की अवधारणाओं पर आधारित होती हैं। कोई हैरत नहीं कि दुनिया के शीर्ष 200 विश्वविद्यालयों में अधिकांश परिचमो संस्थानों का ही बोलबाला रहता है।

'शोध की गुणवत्ता' और कर्मियों, छात्रों और शोध के लिए 'अंतरराष्ट्रीय दृष्टिकोण' की परिभाषा जैसे सूचकांकों में परिचमो पूर्वाग्रह ही नजर आता है। इसमें कोई आश्चर्य नहीं कि ब्रिटेन के टाइम्स उच्च शिक्षा सर्वेक्षण में दुनिया के आला 200 शैक्षिक संस्थानों में 75 अमेरिकी और 32 ब्रिटिश हैं! ऐसे में सवाल उठ सकता

है कि इतनी भारी तादाद में अख़लतरीन शैक्षिक संस्थानों के बावजूद ये देश शिक्षा के स्तर पर उतने बेहतर परिणाम क्यों नहीं दे पा रहे हैं, जबकि शीर्षस्थ संस्थानों में से चुनिंदा 'विश्वस्तरीय' शैक्षिक संस्थान होने पर भी चीन, ब्राज़ील और भारत कामयाबी की नई इबारत लिख रहे हैं। प्रश्न यह भी उठ सकता है कि कहीं ये रैंकिंग परिचमो विशेषकर अमेरिकी और ब्रिटिश शैक्षिक संस्थानों के प्रचार के लिए तो नहीं पेश की जाती ताकि उन प्रतिभाशाली एशियाई छात्रों को आकर्षित किया जा सके जो बेहतरीन गुणवत्ता वाली परिचमो देशों की महंगी शिक्षा का बोझ उठाने में समर्थ होते जा रहे हैं। इन सभी दलीलों को पेश करने के बाद यह भी सोचना होगा कि विश्व के बेहतरीन 200 शैक्षिक

संस्थानों में उच्च शिक्षा के किसी भी एक भारतीय संस्थान का शामिल न हो पाना भारत में उच्च शिक्षा के क्षेत्र में एक ख़तरे की घंटी है। पिछले एक दशक के दौरान भारत में उच्च शिक्षा के क्षेत्र में मात्रात्मक वृद्धि हुई है—संस्थानों की संख्या बढ़ी है, अधिक छात्रों के प्रवेश का मार्ग प्रशस्त हुआ है, अधिक पद युजित हुए हैं और सबसे उपर इसके लिए अधिक धन आवंटित हुआ है, लेकिन यह गुणात्मक विकास में तब्दील नहीं हो पाया है। इसके उलट भारत में प्राथमिक शिक्षा की हालत भी उतनी ही ख़राब है लेकिन फिर भी हर साल इस तंत्र से हजारों की तादाद में प्रतिभाशाली छात्र निकलते हैं और विश्व के सर्वोत्तम संस्थानों में प्रवेश पाते हैं और दुनिया को अपनी मेधा से चमकाते हैं। स्पष्ट तौर पर

भारत में उच्च शिक्षा के कायाकल्प की ज़रूरत है। यह नेतृत्व की भयंकर कमी से जुड़ा रहा है जहां संस्थान अधिक आवंटन को बेहतर नतीजों में परिवर्तित नहीं कर पा रहे हैं। नेतृत्व की कमी शीर्ष से शुरू होती है। स्वयं विश्वविद्यालय में एक शिक्षक होने और विश्वविद्यालय अनुदान आयोग का अध्यक्ष रहने के बावजूद प्रधानमंत्री मनमोहन सिंह ने भारत में उच्च शिक्षा में नेतृत्व की गुणवत्ता सुधारने पर अधिक ध्यान नहीं दिया। उन्होंने शिक्षा के लिए सार्वजनिक आवंटन बढ़ाया, शिक्षा के अधिकार को मूल रूप दिया और निजी निवेश को बढ़ावा दिया। विदेशी निवेश की मंजूरी से संबंधित एक विधेयक संसदीय स्वीकृति की बाट जोह रहा है। लेकिन डॉ. सिंह ने उच्च शिक्षा में राजनीतिक और

प्रशासनिक नेतृत्व की गुणवत्ता सुधारने में पहल करने के बजाय संकोच ही किया। भारत में उच्च शिक्षा विचारधारात्मक दृष्टिकोण और सपाट नौकरशाही प्रवृत्ति से भी शापित रही है। मुस्ली मनोहर जोशी के सात वर्षों के बाद पांच साल तक कमान अर्जुन सिंह के हाथों में रही। यह भी खेदजनक ही है कि मौजूदा मंत्री कपिल सिब्बल भी मंत्रालय, यूजीसी और संस्थानों को उनके द्वारा पहुंचाए गए तुकसान को भरपाई करने में नाकाम रहे हैं। एक वर्ष से सिब्बल अपनी मूल जिम्मेदारी को अनदेखी करते हुए दूरसंचार मंत्री और राजनीतिक संकटमोचक की भूमिका निभा रहे हैं। भारत को उच्च शिक्षा में बेहतर अकादमिक, प्रशासनिक और राजनीतिक नेतृत्व की शिद्दत से दरकार है।