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## OpenClassWare for IIMs

If MIT can put its courses online for free, why can't Indian institutions like the IIMs follow suit?



**V RAGHUNATHAN** 

IT gave a fillip to the Open Course Ware (OCW) movement in 2001, when they placed nearly all their undergraduate and graduate courses, including many audio-video lectures, online. "Unlocking free Knowledge, Empowering Minds," the legend on MIT's homepage underscores the objective of the movement. Today MIT's OCW includes nearly 2,000 courses, accessed by over 35 million users worldwide; 60% from outside the USA. A number of leading universities in every continent has launched similar projects to leverage the availability of the worldwide web.

In India, the OCW movement has been tentative, embodied in the government-sponsored National Programme on Technology Enhanced Learning (NPTEL), to improve the quality of engineering education. It is anchored by seven HTs and the HSc, Bangalore. Another variant of OCW in India has been the Flexilearn portal of the Indira Gandhi National Open University, which not only offers a lot of free course material, but also enables online enrolment of students. Both are largely limited to the use of technology in delivering education, rather than unlocking knowledge and empowering minds.

While OCW has found enthusiastic takers across the world, including China, our IIMs have been lethargic in seizing the initiative. The only exception is IIM Bangalore which at least has a portal OCW@IIMB. But it lists a total of 10 courses across 12 of its departments (six having 'No Published Courses'), and even for these 10, the portal provides only the course description; no content. Other IIMs have no OCW.

This is sad. We have nearly 4.000 private business schools, most of which lack quality faculty, infrastructure and curricula. Qualified faculty with PhDs in management are few. Each of the IIMs awards doctorates in single digits annually. We need tens of thousands of managers for our large infrastructure projects, industry, banks, automajors, airlines, defence, and our large manufacturing sector. We need even more managers to deliver quality education, health, skilling, and a thousand other social services to our 1.3 billion population. And then there are the tens of thousands of SMEs, NGOs, micro-finance and other micro enterprises, crying out for managers in millions, of some minimal quality With 90% of the labour force in the unorganised sector, we need even more managers to steer this manpower towards organised industries.

And yet, IIMs have not taken the initiative to take the pole



ARINDAM

position in addressing this need. Even though most IIMs have increased their intake inresponse to government prodding to do so in recent years, they can do much more to leverage their expensive infrastructure more effectively for the benefit of the country. Can the IIMs rise to the occasion? Can they learn from the prizewinning corn farmer whose secret of success was to share his seeds with the neighbours, because then, when the wind blew, their seeds blew his way enriching his corn.

hey can, if they want to. They must know that their competitiveness does not stem from their course content. Their true assets are the quality of their faculty, students, systems, processes and infrastructure and what they can do with these. Ideally by now, IIMs should have been in the thick of the OCW movement. But it may not be too late. They

could yet do for OCW.2 what MIT did for OCW. What is OCW.2? Well, let's call it, OpenClassWare, the Second Movement. What would OCW.2 do? It would take the classrooms of the IIMs, rather than just the course contents, online to millions of students out there.

IIMs have better quality faculty than most. What if each and every course taught at an IIM, by the best of its teachers in every course, were beamed online to hundreds of thousands of students in thousands of private b-schools across the country? Or even in Reliance Web-World-like outlets? These outlets could be manned by coordinators trained IIMs to help coordinate assignments, clarify doubts, set and evaluate examinations and quizzes, and highlight learning points. Online classes could deliver superior understanding of management principles to online students than what sub-standard faculty can do face to face. The private schools could decide which of the OCW2 classes to subscribe to; students may opt for classes only in say finance or marketing leading to certificate courses in those disciplines; they could pace their learning in an open university framework, say an IIM Online diploma. Thus, IIMs could penetrate every corner of India.

The incremental cost of such ClassWare open to tens or hundreds of thousands of students would be negligible, compared to full-time education. Would such OpenClassWare dilute the IIM brand? Hardly Everyone would know the difference between an IIM Online diploma and an IIM full-time diploma. MIT's brand is not diluted by OCW. It added to MIT's sheen across the world.

Given India's skills in IT and our need to ramp up the quality of our managers, OCW.2 may be an idea whose time has not only come, but is overdue. If we don't do it, we may be passing on the initiative to an MIT or a Harvard. And IIMs would have lost the race again, if they haven't already.

### AFTERTHOUGHT

"It's a funny thing that "
when a man hasn't
anything on earth to
worry about, he goes
off and gets married,"

Robert Frost,
 American poet

### Business Standard ND 18/01/2013

# IIM-A faculty opposes second term for director Samir Barua

Letter to board chairman wants director's charge handed over to dean

VINAY UMARJI Ahmedabad, 17 January

A revolt of sorts is brewing within the imposing corridors of the Indian Institute of Management, Ahmedabad (IIM-A). Even as a search committee is still divided over a potential candidate for the post of director, 30 faculty members have said they do not want a second term for the incumbent director. Samir Barua,

A third of the faculty members have written to A M Nalk, chairman of the board of governors, asking him to advise "the present director to hand over charge to the dean (faculty) or the senior-most full professor" if a new director does not take charge within three months.

At the end of Barua's five-year term on November 7, 2012, the board had offered him a three-month extension, hoping to finalise his successor in the interim. However, several faculty members believe the board had the option to hand over charge to any full-time dean.

When contacted, Naik said: "We have replied to the faculty that we had no choice but to extend the director's term since the search committee was yet to come up with names."

The deadline expires on February 7 and the committee's failure to find Barua's successor so close to the deadline has led to a growing buzz that the incumbent director might be given a second term.

In a letter, the subject of which says



'Managing transition during selection of next director', the faculty members have said: "IIM-A has, over the past 50 years, evolved certain values and principles... and one principle regarded sacrosanct and inviolable is that of a single term for a director."

Asked if the board had asked Barua to hand over charge, Naik did not comment. Barua did not respond to phone calls and an emailed query.

Citing the example of IIM-As first director, Ravi J'Matthai, who established the single-term principle by voluntarily stepping down after seven years, though his contract did not require him to do so, the faculty said some directors had overstayed due to inefficiencies in the system.

Confirming the letter, one of the faculty members said the letter was

### CRISIS MANAGEMENT

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- The letter to the chairman of the board of governors and copied to the director opposes a second term for the latter
- Also opposes the board's extension of the director's term by three months
- Demands the director's be handed over to dean or the senior-most
   full professor
  - Proposes apprising external candidates of the sanctity of the single-term principle at IIM-A
- Board has yet to decide on faculty members' letter

significant in the wake of reports that Barua might be interested in a second term.

Naik, however, said Barua had not applied for a second term. He also denied any discussion in the board meeting regarding a possible hike in compensation package to ₹1 crore for the director's post to attract global candidates.

The search committee, comprising Hasit Joshipura of GSK Pharma,
Arvind Group CMD Sanjay Lalbhai,
Rama Bijapurkar and Mastek's
Ashank Desai, besides Naik, has received 60 applications, some from candidates with international experience.
However, the committee is learnt to be
divided over external candidates with
global experience versus candidates
from within the campus.

NATIONAL EFFORT Beijing is investing \$250 billion a year to produce an unprecedented number of college graduates

Keith Bradsher

SANYA (CHINA): Zhang Xiaoping's mother dropped out of school after sixth grade. Her father, one of 10 children, never attended.

But Zhang, 20, is part of a new generation of Chinese taking advantage of a national effort to produce college graduates in numbers the world has never seen before.
A pony-tailed junior at a new

university in southern China. Zhang has a major in English. But her unofficial minor is American pop culture, which she absorbs by watching episodes of television shows like The Vampire Diaries and America's Next Top Model on the Internet.

It is all part of her highly spe-cific ambition: to work some day for a Chinese automaker and provide the cultural insights and English fluency the company needs to supply the next generation of fuel-efficient taxis that New York City plans to choose in 2021,

"It is my dream," she said. "and I will devote myself whole-

heartedly to it."
Even if her dream is only dorm-room reverie, China has tens of millions of Zhangs bright young people whose aspirations and sheer numbers could become potent economic competition for the West in decades to come.

China is making a \$250 billiona-year investment in what economists call human capital. Just as the US helped build a whitecollar middle class in the late 1940s and early 1950s by using the GI Bill to help educate mil-lions of World War II veterans, the Chinese government is using large subsidies to educate tens of millions of young people as they move from farms to cities.

### **INVESTING IN** 'HUMAN CAPITAL'

Sheer population makes China a huge talent pool which it has decided to harness by laying emphasis on education

2,409 Number of colleges and universities in China, nearly doubled over the last decade

8 mn Graduates produced a year from universities and community colleges in China, a number quadrupled over the

College and Junior college graduates produced by the US each year, with just one-fourth of China's population

195 mn Community college and university graduates China expects to have by the end of this decade

120 mn Community college and east university graduates the US expects to have by the end of this decade

The aim is to change the cur-

ent system, in which a tiny,

highly educated elite oversees

vast armies of semi-trained fac-

tory workers and rural labor-

ers. China wants to move up the

development curve by fostering

a much more broadly educated public, one that more closely

esembles the multifaceted

labour forces of the US.

It is too early to know how

While potentially enhancing

China's future as a global indus-trial power, an increasingly edu-

cated population poses daunt-

ing challenges for its leaders.

well the effort will pay off.



Zhang Xiaoping (centre) a junior at Sanya University, in Sanya, China.

#### IS VOLUME ENOUGH?

- Some experts in China contend that the growth of classroom slots in higher education has outstripped the supply of qualified professors and instructors
- China's president Hu Jintao, in a speech in 2011, acknowledged shortfalls in the country's higher education system. "While

With the Chinese economy

downshifting in the past year to

a slower growth rate, the coun-

try faces a glut of college grad-

uates with high expectations

Much depends on whether

China's authoritarian political

system can create an educational

system that encourages the

world-class creativity and inno-

vation that modern economies

require, and that can help generate enough quality jobs.
China also faces formidable

difficulties in dealing with wide-

spread corruption, a sclerotic

political system, severe envi-

and limited opportunities.

people receive a good education," he said, "there are significant gaps compared with the advanced international level

Giles Chance, a longtime consultant in China who is now a visiting

professor at Peking University, said that many of the tens of millions of new Chinese college graduates might find jobs at

manufacturers but did not have the skills to compete in American firms.

China's population ronmental damage, inefficient state-owned monopolies and other problems. But if these issues can be surmounted, a bet-ter-educated labour force could help China become an ever more

formidable rival to the West. 'It will move China forward in its economy, in scientific innovation and politically, but the new rising middle class will also put a lot of pressure on the government to change," said Wang Huiyao, the director general of the Center for China and Globalization, a Beijing-based search group.

To the extent that China suc-

ceeds, its educational leap forward could have profound implications in a globalised economy in which a growing share of goods and services is traded across international borders. Increasingly, college graduates all over the world compete for similar work, and the boom in higher education in China is starting to put pressure on

including in the United States. Beijing Geely University, a private institution founded in 2000 by Li Shufu, the chairman of the automaker Geely, already has

employment opportunities for

college graduates elsewhere -

20,000 students studying a range of subjects, but with an emphasis on engineering and science,

particularly auto engineering. Li also endowed and built Sanya University, a liberal arts institution with 20,000 students where Zhang is a student, and opened a 5,000-student vocational community college in his hometown, Taizhou, to train skilled blue-collar workers.

China's growing supply of university graduates is a talent pool that global corporations are eager to tap.

"If they went to China for brawn, now they are going to China for brains," said Denis F Simon, one of the best-known management consultants specialising in Chinese business

Multinationals including IBM, General Electric, Intel and General Motors have each hired thousands of graduates from Chinese universities.

"We're starting to see lead-ers coming out of China, and the talent to lead," said Kevin Taylor, the president of Asia, Mideast and Africa operations at BT, for-merly British Telecom.

The overarching question for China's colleges is whether they can cultivate innovation on a wide scale — vying with the US' best and brightest in multimedia hardware and software applications, or outdesigning and outengineering Germans in making muscular cars and automated factory equipment.
Sanya University is ramping

up international business education. Students there, like Zhang, try to learn as much as possible about foreign markets: their languages, cultural touchstones and more

"The status of China is growing all the time; we've got a really important role in international markets," she said.

## Our scientific experiment

FALL the nations that got freedom from the colonial powers in the 20th century, India had the most progressive leadership, not only in political thinking but also in science and technology. Almost everyone admires and appreciates Jawaharlal Nehru's passion for science and technology, both for the economic well-being of the country and for deepening secular values through the development of a scientific temper. Fortunately, all those who have followed him have more or less been benevolent towards science and technology. However, a passionate approach towards advancing science and technology has been missing among the political class, policy-makers and sciencetechnology practising community. That is why, in spite of a visionary start, we are still struggling to be counted as a big science and technology nation.

In general, we are people with a quasi-feudal mentality. Hierarchies are more important to us than passion for knowledge. Rituals and superstitions come more naturally to us than a scientific temper.Although the scientific community will claim to be more progressive than society at large, a quest for exclusivity, a bureaucratic disposition and comfort with mediocrity are hallmarks of India's science and technology community. There is a deep sense of inferiority to western science, although there is a general lack of desire to follow the good practices of science and technology management in the western countries.

The Science, Technology and Innovation (STI) Policy 2013, authored by the ministry of science and technology and released at the 100th Indian Science Congress in Kolkata, unfortunately reflects all these propensities. It is a tepid document, full of wishes and desires, but it hardly describes any structural or procedural changes which will achieve the grand goal of integrating science, technology and innovation to create value in an inclusive manner. The declaration lists 12 points to capture India's aspirations in STI promoting the spread of scientific temper; enhancing skills; making careers in science, research and innovation attractive; establishing



The new science policy gestures in the right direction, but provides for no structural change

**DEEPAK PENTAL** 

world-class infrastructure and gaining global leadership in select frontier areas; making India among the five top global scientific powers; enhanced private-sector participation in research and development (R&D) and converting it into applications through a PPP model; seeding science and technology based high-risk innovations. All of these aim to create a robust national innovation system.

Haven't we wished all this before? Various departments of the science and technology ministry, as well as other ministries, continue to run scores of schemes trying to promote all these facets. In fact, there is a tendency to start new programmes and let the existing ones decay. What we need is an honest appraisal of all the schemes

With India's brightest opting for engineering and management degrees, innovation is bound to happen. What we should worry about more iscreating a science-technology interface to develop robust technologies for meeting national needs and for the creation of wealth. This is where organised thinking and a proper policy framework could be most useful.

The most appropriate vehicle for supporting science, and a science and technology interface, is a competitive grants system funded by public money. All strong science and technology countries have exactlent competitive grants systems where scientists and technologists individually, and more recently in large consortia, submit R&D projects that are reviewed and funded.

Haven't we wished all this before? There is a tendency to start new programmes and let existing ones decay. The hope lies in making structural changes that will circumvent our cultural deficit, and break the cycle of over-bureaucratisation and comfort with mediocrity.

and learn from both the failures and the successes. Unfortunately, the cultural deficits of Indian society and the scientific community cannot be easily wished away. The hope lies in making structural changes that will circumvent our cultural deficit and break the vicious cycle of over-bureaucratisation in science and technology and comfort with mediocrity.

Here I will suggest some structural changes in the way we deal with STI issues which may bring better dividends.

India's grand challenge lies neither in science nor in innovation. Great insights in science cannot be seeded or wished for, they just happen, provided there is passion for knowledge in society. In innovation, India has done well. A recent report on India's STI achievements commends it for frugal innovations.

Fortunately, in India, all the science departments have competitive grants systems for funding R&D projects. However, there are too many schemes and decision-making is excruciatingly slow. The most important innovation we require is a proposal tracking system that will track the progress of the proposal from submission to peer review to rejection or acceptance to final release of the grant. Currently, these procedures are taking about one to two years. If we care for science and technology, we need to cut short this time to six months. In any case, science departments very urgently require enterprise resource planning to streamline their processes. Innovation should start from the science departments itself,

The second important structural change is comprehensive funding of R&D projects, at least to the uni-

versities and public institutions. With the increased funding for R&D promised in the 12th plan, there is no reason to keep the concept of comprehensive funding out of the reckoning. This will bust the ill-conceived design of keeping universities starved of research funding.

Once the project is sanctioned, investigators should be given the freedom to use funding earmarked for consumables and procuring services without bureaucratic hassles in their own institutes. The vice-chancellors and directors of our universities and institutes must trust the scientific community to use the project funds properly.

Every effort should be made to expand and strengthen institutions that serve the cause of both teaching and research rather than to open exclusive research institutions around personalities. The culture of research institutes, in any case, is antithetical to creativity in the long rum as scientists and technologists in such institutes do not teach and therefore do not contribute towards inspiring the next generation.

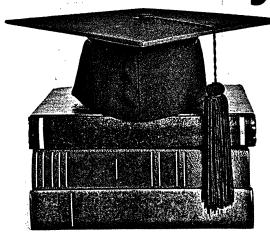
While some attempts are being made to attract young scientists and technologists who have drifted abroad for post-doctoral research back to the country, it is critical that a new generation of human resource is created by sending students for doctoral work in leading science and technology institutes across the world. The new IITs, central universities and Indian Institutes of Science and Education Research should be populated with such researchers and teachers, but our comfort with mediocrity is so high that we do not seem to care to look at a model through which East Asia, China and, more recently, Latin America have benefited tremendously.

All these structural changes can be carried to meet India's science and technology aspirations, but implementing them will require strong convictions and the ability to cut through the current policy haze. Otherwise, wishes will mostly remain just wishes.

The writer is professor of genetics and former vice-chancellor, University of Delhi express@expressindia.com

## Be on the money

With management topping the priority chart for many students, the country witnesses a high number of B-schools replete with management aspirants. According to industry experts, Indian management education should emphasise on professionalism to nurture global managers. Kanchan Gogate reports



anagement continues to be the watchword in education as well as corporate circuits. Promising students earn their stripes at leading B-schools. With management topping the priority chart for many students, the country witnesses a high number of B-schools replete with management aspirants. with management aspirants According to industry ex-perts, Indian management education should emphasise on professionalism to nurture

professionalism to nurture global managers
In spite of a high number of fresh management gradustes passing out every year, the industry is in dire need of crisis managers. Experts feel that Indian management education must step up the gas to bridge the gap between management graduates and industry requirements. It's high time Indian management education upgraded itself octatr to global needs.

India must look at the mangers fitting into today's cutthroat competition, says

cutthroat competition, says Dr (Capt) C.M Chitale, head Dr (Capt) C.M Chitale, head of the department of management sciences, University of Pune. "Despite mush-rooming B-schools, what we lack is mangers thinking out-ofthebox. Today industry requirements are different and corporate sector is becoming more demanding. We should

nurture global managers who will not only sustain but will also excel."

Management is not mere education but culture and at-titude, Chitale opines. "It should percolate deep within. Nowadays, I find institutes acting more as placement acting more as placement agencies. Syllabus is more or

acting more as placement agencies. Syllabus is more or less industry-centric but what all matters is implementation. Management is required everywhere and future managers should get their lessons from day-to-day things in life. Keep your eyes open and the world has a lot many things to teach you. The attitude for learning is important."

Discipline is the key, he feels. "It's a wrong notion that education is confined to institutes. For good managers, training begins in childhood. Discipline is the most important part. A manager should be a disciplinarian leading by example. Indian management aspirants need orientation. Many management research journals have pointed out the

Many management research journals have pointed out the competence required to mould Indian managers." Technology has not only altered the role of today's managers, says P C Shejwalkar, a veteran management expert and Professor Emeritus at the University of Pune. "Today, the industry is quite demanding and Indian

management schools must ensure that their products don't fall short of requirements. Corporate houses seek hardcore professionals and don't compromise on quality. B-schools should be telling their students the prerequi-sites of the industry. Students must understand that recruiters don't wish to hear

cruiters don't wish to hear management theories but want to assess you on the basis of your competence." It's observed at global level what is expected from managers, Shejwalkar feels. "Indian managers fail to understand subordinates. We require competent people who understand challenges the multinationals are throwing multinationals are throwing up. Foresight is the prerequisite. One must have a good study of the future demand-supply ratio. What is expected more is involvement. I advise managers to make commitments and learn to hon our them. Managers need to be confident and must keep be confident and must keep positive approach. B-schools may hone managers but no one can forget individual re-sponsibilities." Experts also stress on management education fo-cusing on entrepreneurship as today's age demands neo-

as today's age demands pe ple who can generate jobs.

Times Of India ND 18/01/2013

## In space, a room that can be folded like a shirt

### Nasa's New Pod Will Be Made Of Floppy Cloth, Not Metal, So That It Can Be Inflated Like Balloons

North Las Vegas: An inflatable space pod to be attached to the International Space Station in a couple of years will be like no other piece of the station. Instead of metal, its walls will be made of floppy cloth, making it easier to launch (and then inflate).

Nasa said on Wednesday that it had signed a \$17.8 million contract with Bigelow Aerospace to build the module, which could reach the space station as soon as 2015. That is a bargain-basement price compared with most equip-ment the US and other countries send into space, and the Bigelow agreement could serve as a model for how Nasa puts together missions at lower costs by using a Kmart strategy: buying off-theshelf pieces instead of developing its own designs.

"This programme starts a re-lationship that we think, and we hope, is going to be meaningful between Nasa and ourselves,' Robert T Bigelow, the chief exec utive of Bigelow Aerospace, said at a news conference here at the

company's headquarters.

Low-Earth orbit, he said, is the "first target," but larger mod-ules could be used for stations in deep space or for habitats on the Moon. "We have ambitions to get to the Moon someday, to have a base there," Bigelow said.

The fold-up, blow-up approach solves the conundrum of how to build something voluminous that can be packed into the narrow payload confines of a rocket. The soft sides of the module, called the Bigelow Expandable Activity Module, or Beam,

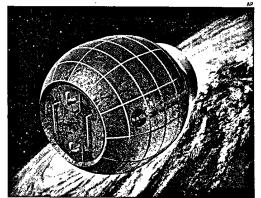
will allow it to be scrunched like a T-shirt in a suitcase.

At the space station, it will be tached to an air lock and then inflated like a balloon and expanded by a factor of 10 to its full - about 13 feet long and 10 feet in diameter, with about 560

cubic feet of space inside.

At least initially, it will remain empty as Nasa gathers data about its characteristics, including temperature and protection against micrometeorites:

The balloonlike structure is carefully designed not to pop. The fabric walls will consist of several layers including Vectran, a bullet-resistant material. Even if punctured by a high-speed meteorite, the fabric does not tear. A hole in a metal structure in space, by comparison, can cause explosive decompres-



VIEW FROM ABOVE: An artist's impression of an inflatable space station. Nasa expects to install the module by 2015

sion as air rushes out. When the Beam module reaches the space station, astronauts might go to it to seek solitude; engineers expect it will be the quietest spot there. The fabric walls absorb sound vibrations instead of transmitting them.

Beam revives a concept that Nasa developed more than a dec-ade ago for an inflatable four-story crew quarters on the space station. Congress halted the work as the station's construc-

tion costs grew sharply.
Bigelow licensed the technology from Nasa and set up his fac-tory in North Las Vegas, investing over \$250 million of his own money. The company has already launched two unmanned prototypes into orbit, showing that they can remain inflated for years, nythews service

## ISRO lines up SARAL for February, restored GSLV for April

### SARAL will study sea surface heights and have an altimeter

Madhumathi D.S.

BANGALORE: The Indian Space Research Organisation (IS-RO) has slated its first launch of the year - ocean study spacecraft SARAL for February 14.

. It will herald the 8 to 10 missions, including satellites and launch vehicles, which ISRO has planned this year,

Flights of the GSLV rocket would be resumed and the first of the navigational spacecraft would be sent up, an ISRO official told The . Hindu.

Along with the 450-kg Indo-French SARAL, the Polar Satellite Launch Vehicle (PSLV) will put into orbit six small experimental satellites built by western universities for a fee.

SARAL would be one of 12-12.

cog in studying sea surface tests and validations, the of-Positioning System. heights and other aspects, a ficial said. the official said.

RO's Oceansat-2, but with an altimeter (named 'Argos'

In October 2012, NASA orbit.
relied on Oceansat-2 to get ISRO had finer details of Hurricane programme on hold after it 'Sandy' that wreaked havoc on the eastern U.S.

lite with ARgos and ALtiKa, "lysed and corrections made, two launch pads," he said. the two main devices on it, the official said, which have been provided a by French space agency CNES. Besides building the spacecraft, ISRO will launch the national navigational and operate it through its satellites or navsats — the life.

months later than the earli-hicle. IRNSS or the Indian er planned fancy date of 12- Regional Navigation Satel-

the very few such ocean- The December launch was centric satellites and a vital put off to complete a few

Around April this year, IS-It would be similar to IS. RO expects to resume flying the GSLV rocket. The GSLV-D5 will lift the communicahere) to measure heights. A tions satellite GSAT-14 into

ISRO had put the GSLV suffered two successive failures in April and December SARAL is short for Satel- 2010. The lapses were ana-

### Navigational satellite

IRNSS-1 — which will fly on SARAL will come up two, a Polar Satellite Launch Velite System with its seven

satellites is tipped to be India's own regional Global

"We hope to complete the navigation constellation during 2015-16," by following this up with two more navsats in 2014 and the remaining a year later, the official said.

"For all these launches from the Sriharikota launch centre, we normally need an interval of 45 days between two launches since we have

GSAT-7. a dedicated satellite for the Navy, is also set to be launched around May May will see the first of on a European Ariane rocket. Two other larger satellites, INSAT-3D and GSAT-10, will also use 'procured' or foreign launches on separate Ariane vehicles in the second half of this year.

Publication: The Times Of India Delhi; Date: Jan 18, 2013; Section: International; Page: 23;

## Indian researcher bags award for Alzheimer's drug

London: London-based Indian researcher Mahaveer Golechha has been selected for an award for his work on a drug to cure Alzheimer's.

The 27-year-old will be travelling to San Francisco to receive the Alzheimer's Drug Discovery Foundation's 'Young Investigator Scholarship Award' at the 7th Annual Drug Discovery for Neurodegeneration Conference to be held next month.

"I feel very proud that I have proved world class research in the area of medicine can be done in India," Dr Golechha said on Thursday.

He has been recognized for his outstanding research on 'naringin', a bioflavonoid found in grape fruits and citrus fruits. In his study, he found that naringin possesses significant "anti-Alzheimer activity" and will form the basis of further research to develop as a cure for the degenerative disease in old age, which worsens as it progresses.

"Alzheimer's disease is a neurodegenerative disorder that generally affects the elUK-based Mahaveer Golechha, who did his Master's and PhD from AIIMS in New Delhi, hopes the global recognition will open up further avenues for budding scientists in India

derly population. Till date the treatment was symptomatic but naringin will act at pathological level and have lesser side effects," he said.

"I hope this award creates further avenues for budding scientists in my country to be recognized for their work and facilitated to follow their dreams," said Golechha, who completed his Master's and PhD from the All India Institute of Medical Sciences in New Delhi, where he was involved in research on Alzheimer's and epilepsy.

His work on naringin has also been included for a poster presentation at the San Francisco conference. pm