

Newspaper Clips

July 18, 2011

Publication: The Times Of India Delhi; Date: Jul 18, 2011; Section: Education Times; Page: 48;



NEWSFLASH

Largest batch at IIM-L

The 2011-2013 batch of the postgraduate programme in management (PGP) at IIM Lucknow is the largest batch inducted to date with 419 students. This programme is aimed at preparing senior-level executives in the industry coming from various disciplines. Like any other regular management programmes, PGP is a two-year course and admission is through the common admission test (CAT).

Sharing details about the course, Arunabha Mukopadhyay, chairperson, admissions, IIM-L, says: "The programme lays maximum emphasis on the absorption of knowledge rather than only imparting it. Out of the 419 students inducted, around 400 students have opted for the postgraduate programme in management, while the other 19 are going to pursue the postgraduate programme in agri-business management (PGPABM). Besides, around



The programme lays maximum emphasis on the absorption of knowledge

IIM Lucknow has inducted the largest batch of students, 419, to this year's postgraduate programme in management, Neha Arora reports

the course. The mode of teaching is altogether a different experience. To impart effective learning, a healthy student-teacher ratio is maintained. More emphasis is laid on case-based learning and theoretical aspects. Regular assignments, presentations, live and simulated projects, with periodic evaluations will help us grow in our subject day-by-day." Students learn theory in class and apply the knowledge through various projects and class assignments.

However, there has been a significant dip in engineering students opting for the PGP course this year. Though majority of the students still have an engineering background (83%), their percentage has come down considerably from what it was in the previous year (88%). Explaining it as an admission policy, Mukopadhyay says, "We wanted students from various disciplines such as commerce, science, med-

140 students out of 400 have less than 12 months of work experience.'

Rudranil, a first-year student, PGP, says, "With an engineering background, I have a fascination towards managing firms. With this aim, I enrolled into



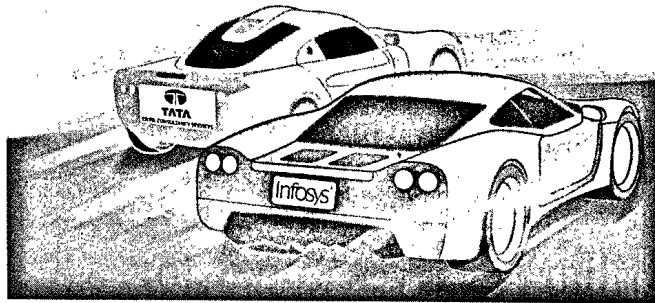
ical, etc. There are about 36 students from commerce, eight from science, four from architecture, 11 from medical and seven from other varied disciplines."

The total cost for the two-year pro-

gramme is about Rs 12 lakhs. Besides, IIM-L also extends scholarships on the basis of merit to deserving students.

www.iiml.ac.in

TCS: Indian IT's New Bellwether



ARINDAM

India's No. 1 software exporter threatens to usurp Infosys as industry's top brand on strong numbers

RAHUL SACHITANAND & TV MAHALINGAM,
MUMBAI

Besides being bested on its numbers by larger rival TCS, India's No. 2 software exporter, Infosys also appears to be losing the tag it perhaps covets the most—that of being India's most admired IT brand. Even as it struggles to re-invent itself to tackle resurgent rivals, the Bangalore-based firm maybe losing out to India's largest firm—until recently considered the least brand-conscious of India's top outsourcers.

For long, Infosys has consistently been recognized as India's most admired IT Company by business consultancies and media in India and abroad. It has, for instance, been ranked as India's most admired company by Wall Street Journal Asia for nine consecutive years.

"Infosys hasn't done what it should have (financially and strategically) and this has affected its brand," says Jessie Paul, Founder of Paul Writer, a strategic marketing advisory, and former marketing chief for Wipro Technologies.

She adds that TCS' brand has also benefitted from being the largest Indian information technology company. "The number two and three players have suffered from confused strategies," she explains. "TCS has muscled into the vacuum their missteps have created."

Infosys and TCS declined to comment.

Deepak Khosla, sales and marketing head for NIIT, thinks that financial performance is the biggest contributor to building a company's brand. TCS is expected to grow the revenue gap between itself and Infosys to nearly \$3 billion by the end of this fiscal and its profits are growing faster too. Infosys' revenues had nearly matched TCS around four years ago, but the latter has since pulled away. "No branding is better than strong financial performance," says Khosla.

D-street analysts believe that TCS is ready to usurp the hallowed prefix that Infosys has owned for nearly two decades: bellwether. "Till about a year ago, Infosys used to be the benchmark for IT. But ever since TCS started outperforming Infosys regularly, we look to TCS as the leader of the pack," says Srishti Anand, IT research analyst Angel Broking.

INFY LOSES STEAM

Infosys, which was once the benchmark employer for thousands of wannabe software engineers has fallen on that scale too, as attrition levels have risen. For the last quarter, Infosys attrition was over 21% while TCS was just over 16%.

"Infosys doesn't enjoy the same premium on campus or among lateral hires anymore," says the CEO of a HR consultancy in Bangalore, who requested anonymity.

Some marketers actually argue that TCS always had a fairly lackadaisical approach to brand building and only its strong financial performance alone may have helped its cause.

"The contours for Brand TCS and Infosys are quite blurred," says R Sridhar, a CEO and business coach and former chairman of OgilvyOne Worldwide, Mumbai. "Financial performance is not the only metric."

More intangible benefits such as innovation programmes need to be added to the mix before deciding on TCS' rise (or Infosys' fall) in the brand sweepstakes.

YLR Moorthi, a professor of marketing at IIM, Bangalore, thinks TCS has always had the edge over Infosys by being older and a pioneer in the assembly line delivery of software code. "But, Infosys has built a much stronger brand for years, despite being a relatively smaller firm," he contends. Some of this brand heft may have come from initiatives such as the InStep, a student internship program at Infosys, which saw American students with near-perfect academic scores eye an opportunity to work at its Bangalore campus and interact with NR Narayana Murthy.

Over three decades, Infosys has been at the vanguard of disclosures to investors and analysts with the "when in doubt, disclose" dictum coined by co-founder NR Narayana Murthy. Co-founder Nandan Nilekani has boosted the company's image by quitting at the top, opting to kick-start and help India's unique ID project now called Aadhar.

"When you want to create a bellwether, you need to have people who go out there and talk...and over time they themselves become brands," says Anand Halve, co-founder of Chlorophyll, a brand consultancy. "As these people like Nilekani and Pai have stepped away, the Infosys brand which has been linked with these individuals has suffered," he adds.

REINVENTION OF TCS

TCS, on the other hand, has gone through a reinvention of sorts starting with a restructuring exercise in 2008. TCS reorganised itself along 23 independent business units, each of which has its own P&L responsibilities—a move that helped TCS weather the recession better. TCS also went through a top management change as N Chandrasekaran took over as MD & CEO in 2009.

Unlike his predecessors who preferred to maintain a low-profile, Chandra—as he is known within TCS—is a lot more 'visible', which has also helped the brand in India.

"TCS has perhaps realised that being invisible is not a great idea," says Halve.

TCS battle on the branding front though has just begun. "Early on, TCS bet on a long-term strategy and that is paying it dividends now," says Khosla of NIIT. "Their competition is now IBM and Accenture."

Even as it surges away from the rest of the pack at home, Brand TCS may have a much tougher role to play on the global stage.

We always improve our systems from whatever we learn, says ISRO Chairman

INTERVIEW

Madhumathi D.S.
Bangalore, July 17

Post-February this year, the Indian Space Research Organisation was jolted out of its reputation for integrity and transparency and went into trauma. The space agency that provides satellites as the backbone for the country's Internet, broadcasting, telephony and weather services had come under a cloud, that of the controversial 'S-band spectrum deal' between its commercial arm Antrix Corporation and wannabe partner Devas Multimedia P Ltd.

The Government (in February) annulled the irregular contract for two satellites, notionally compared in value to the 2G spectrum, while ISRO slowly lifts itself out of a crisis of credibility.

Dr K. Radhakrishnan took charge in October 2009 of the triple posts of the ISRO Chairman, Secretary of the Department of Space and Chairman of the Space Commission.

He has just shed the fourth hat, that of the Chairman of Antrix Corporation, even as he presides over reforms in the Antrix role and structure.

He is also on the latest third high-level committee that is probing the botched deal.

In this interview since the crisis broke out he tries to clear the air on a few unanswered questions on Antrix, the impact of the controversy, the space business and India's next space frontiers.

Excerpts:

What changes has the fall-out of the Antrix-Devas S-band spectrum controversy brought about for ISRO? Is ISRO's traditional autonomy reduced and is there demand for greater accountability from it than ever before?

There is no change at all, I don't think so. Basically, it is the robustness (within it) that

the system brings out if improvements are required.

Until the controversy hit ISRO in February this year, it enjoyed a good press, wore something of a halo. How has the organisation coped with the controversy, a dented image, psychological issues and visibility for the wrong reasons? As Chairman, it was a legacy problem for you, too.

(As for legacy) Well, ISRO is ISRO. When we take over, we take over entirely and we are responsible for what we are today.

It is an integrated product of the contributions of the staff. (Not) just for the positive things, I'm accountable for everything in the organisation.

You asked about the morale of the organisation. It can be judged from what it provides the country. In the last couple of months, ISRO has produced the PSLV C-16, a world-class ResourceSat-2; GSat-8 and now, the PSLV-C17 and the communications satellite GSat-12. To have three major missions involving four satellites and two launch vehicles in four months from April shows how the organisation has functioned. You have to look at the people, their faces and the organisation.

What you call aberrations - or distractions - of course, take away part of our energy. They are an unwanted thing. Certainly, we can do much more if the distractions are not there.

One change you made was to have a separate Chairman and Managing Director for Antrix. Is that enough to plug vulnerable points?

That was one very clear action that we have taken. We were ourselves thinking about it very seriously. When Antrix was set up in 1992, it was thought fit to have the ISRO Chairman as its Chairman. Now, the time has come to change this. Antrix has grown from an organisation which had a turnover of about Rs 55 lakh to a company with a turn-



Clearing the air: The ISRO Chairman, Dr K. Radhakrishnan.

over of Rs 1,000 crore. Initially, it was providing other countries access to our IRS (Earth observation) data.

The level of its operations has expanded the world over, with several users for its commercial operations, (be it) launch services or satellite capacity or technology transfer. It's a huge order of development that needs attention and that has driven us to have a separate CMD.

The other part I want to say is, we always improve our systems from whatever we learn. Whenever you see an aberration, you look at the cost of it and try to improve yourself. That process is always there and that is the learning in an organisation.

Even now, Devas Multimedia is pressing in the International Court of Arbitration for getting the agreement restored.

As per the contract, there is a legal process (that is on.) You have to talk to the Antrix CMD. I don't know what is the integrity of that news.

Isn't India the jurisdiction for settling any dispute between the two sides?

See, you have the answer to that! As per the terms of the contract, it will be handled between Antrix and Devas.

What happens to the special satellites GSat-6 and 6A that were promised for Devas' services in the annulled pact? What is the status of GSat-6?

GSat-6 and 6A are for strategic and societal needs. As for GSat-6, some more work has to be done on it. It should be up sometime in fiscal 2012-13 on the second indigenous GSLV planned from now. (It will come up) about six months after the next GSLV-D5 vehicle that will carry GSat-14 satellite around the second quarter of 2012.

Did the controversy drive away those who wanted to do genuine business with Antrix/ISRO?

As I have said earlier also, there are about 11 (foreign) satellites in the pipeline with firm requirements given to Antrix

for launch [on the PSLV rocket.] People understand what this is about.

Will you be on the Antrix board?

No, I will not be on the board but they will report to me as DoS Secretary.

An Indo-US aerospace mission led by the US Secretary of State is visiting shortly. How has the lifting of sanctions by the US changed matters for ISRO? Is there any specific engagement with or access to US companies Boeing, Lockheed Martin and others?

Engagement was always there. Chandrayaan-1 was a major partnership. Their invitation to ISRO to join the MoonRise mission (NASA's 2016 robotic lunar venture) is a major step. We also have arrangements with US universities for exchange programmes.

Now, to the commercial part of it. The four (ISRO) entities were formally removed from the list in early 2011. One has to see the impact of it in terms of supplies coming from there.

One can talk about it may be after a year. Several agencies keep discussing with us. These are all exploratory.

Before we take a decision, there is a techno-commercial aspect to be looked at - such as what is advantageous for ISRO and India in the short or long term.

It is said the domestic industry has disappointed by not rising to the occasion for space programmes.

I will put it the other way. Right from the '70s, starting with our SLV-3 and satellite development programmes, industry has been with us. It has only increased in terms of number of firms participating as well as the extent of their contribution. Today, 500 firms work with ISRO, from small to large companies; private and public sector. Some have a very specific aerospace division meant for ISRO. Some have risen from fabrication to integration.

We are looking at an enhanced role for them, as risk-sharing partners, themselves investing as consortia in some facilities and also gearing up to take up larger levels of integration. The PSLV is a proven vehicle; and certain communications satellites are standard ones. I have talked about the arrangements that we plan at Bangalore, near Sriharikota and Ahmedabad. We should know this clearly in a year. We should also know from them how they would like to work with ISRO.

So many foreign satellites hover over the sub-continent and offer capacity to Indian operators (by leasing through ISRO). When will we see ISRO go out into other markets with its capacity?

We have a substantial national demand and meeting that is our first job. We have to study the Antrix plan.

ISRO talks of undertaking a human flight, a second Moon trip and even a Mars mission in the coming years. Should ISRO follow the other space

agencies on planetary exploration? Or should it set a different trend for the rest?

We are clear from the beginning about national priorities and what we need to be there. Our thrust is our unique space applications in communications, remote sensing and (soon) navigation. The determining factor is to have an indigenous space flight (system) that is cost-effective and reliable; and that our satellites should have a longer life than the present 10-15 years.

Now, planetary exploration is always a priority. The science is exciting, challenging, drives technology development in terms of instruments and capability to reach there. That is a must. That will keep us going.

The international community has a renewed interest in Moon and now we are there. Some ingenuity came out of the Chandrayaan-1, it made us do new instruments, propulsion systems and the Deep Space Network.

The human flight is something for the future. We will embark on it once we study it. Sending a satellite to Mars, too, is a target of our study.

Are the planners sceptical about funding the human or Mars missions?

This fundamental question will always be asked. In early 1960s, people asked, 'why a space programme, why the expenditure'. They continue to ask this. Professional groups (the Madras Institute of Development Studies, for one) have documented the tangible and indirect benefits. Now, you are convinced that if you put so much money into the space programme every year, you get this much benefit - apart from the prestige.

The human space flight will also lead to such a situation in 10 or 20 years. There are projections for 2030-35 of human habitations getting to Mars. This is next logical step in space exploration.

Business Line ND 18/07/2011 e world P-1

In a class of its own

Technology-enabled learning has 'clicked' with students, say companies in the online tutoring space.

T.E. RAJA SIMHAN

You are an IIT-aspirant living in a remote corner of India and you want access to quality teachers/lectures and learning tools? Or your kid missed the Algebra class this morning, and she wishes to make up.

Wish granted, at the click of a mouse! Years ago, this might have been just a dream. Not any more. Technology-enabled learning or virtual learning has provided an environment where teacher and student do not have to be in the same place at the same time, in order to interact.

Thanks to better connectivity and an array of solutions in the market, nearly 10 million students have logged into online classrooms in India run by the likes of EdServ Ltd, Everonn Education Ltd, Educomp Solutions Ltd and Pearson Education. Not surprisingly, these companies have been quick to tap the online learning opportunity and have come out with a slew of offerings to woo students.

THE OPPORTUNITY SIZE

Given the vast numbers of students and challenges of delivery, the Indian education landscape is well placed to adopt technology-enabled learning. With 673 million (60 per cent) of the population below 30 years of age (median age: 25 years), the sector has immense potential. From \$28 billion today, the Indian education sector is expected to grow to \$47 billion over five-six years.

Citing the immense growth in this sector, Everonn points to how private educational institutions have proliferated rapidly over the past decade with the kindergarten to Class 12 segment estimated at \$20 billion; private professional colleges at \$7 billion and

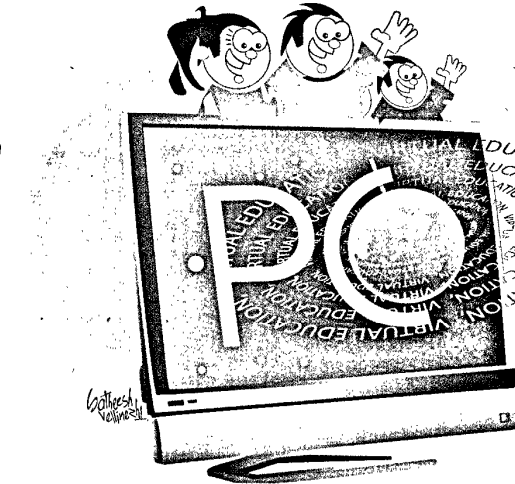
The other side to IT

Virtual education is fine but nothing like meeting eye-to-eye with the students, says V Sreevathson, founder of the Chennai-based Bharadwaj Institute, which trains students to become chartered accountants, cost and works accountants and company secretaries.

The seven-year-old institute teaches around 1,200 students every year.

Virtual education could complement but not substitute personal classroom teaching. "In virtual education we do not know whether the student understood what we taught. A student views the monitor while the teacher looks into the camera. We cannot understand the body language through a monitor," says Sreevathson, who is a Chartered Accountant by profession and teacher by passion.

The real issue is about lack of quality teachers due to which there is a spurt in virtual education, he says, adding, "we would never look at venturing into virtual education." — T.E.R



tutoring at \$5 billion. Out of one million existing schools, around 75,000 are privately run.

The digital opportunity is undeniable. In a big boost to tech initiatives, the Central Board of Secondary Education (CBSE) is encouraging schools to use "Digital Content Materials" in classroom teaching.

The CBSE has advised all its affiliated schools to set-up at least one ICT-enabled classroom for each grade, from I through XII. Further, schools are encouraged to progressively increase the number of classrooms with digital content and move towards enabling every single classroom with such learning infrastructure, Shantanu Prakash, founder and CEO, Educomp Solutions Ltd, said in a recent conference call with analysts.

WHAT'S ON OFFER

Educomp's WiZiQ — a web learning platform — offers a virtual classroom equipped with live audio, video, white board and text chat elements. It even facilitates payment for the teaching and tutoring services.

EdServ offers products from 'Cradle to Career' on a single web platform, www.lampsglow.com. From preschool to Engineering exam support and preparing for CA finals, EdServ has a range of offerings for every age group.

Students can access the educational products that the company offers, at a starting price of Rs 199. Once they exhaust the number of hours fixed for the cate-

gory, they will have to top-up and recharge.

EdServ says by way of Engineering exam support — electrical, electronics, mechanical, computer science and IT — all semester classes are available online. There are four lakh engineering students in Tamil Nadu, of whom 40 per cent have arrears (or backlog exams) to clear.

EdServ helps them clear these 'arrears' through online classes. At any point of time there are about 20,000 students on board the virtual classroom, says S Giridharan, CEO of EdServ.

Also, be it entrance exam for IIT-JEE, AIEEE, CA, CAT, or Law, online support is offered through live and recorded video sessions. An IIT-JEE aspirant based in Theni or Dindigul (in Tamil Nadu) or any other tier-II/III town can access EdServ's content on lampsglow.com. Other offerings include test preparation, model papers, reference materials, live tuitions and pre-recorded sessions.

Everonn follows a student pay model in its virtual and technology-enabled learning solutions (VITELS) division. Students pay to access content or to listen to lectures broadcast by teachers from 15 studios in Chennai to remote locations, including Everonn Learning Centres, across the country.

They use presentations, video, audio and digital content to communicate, engage and interact with students.

Everonn, through VITELS, also connects to colleges and retail centres offering skill development and job-oriented programmes. With VSAT (very small aperture terminal) technology, a single instructor can teach thousands of students across the country.

Also using VSAT Technology platform is Pearson Education Services. Meena Ganesh, CEO and MD of Pearson, says her company's EduriteONE programme utilises this technology platform to reach out to the most remote locations of India. Beamed from Bangalore, this platform replicates a real classroom learning environment and enables two-way, audio-video interactions.

Meanwhile, Pearson's DigiClass solution empowers teachers to transform traditional blackboard-and-chalk classrooms into interactive sessions. The multimedia content enables teachers to better explain complex concepts.

The DigiClass solution is based on the philosophy of Cognitive Learning Approach. According to this, there is a close relationship between "what we know" and "what we need to learn".

By associating new material with something familiar, students can better understand and retain new information. DigiClass' multimedia content — including 2D/3D images, videos, demonstrations, simula-

tions, rhymes, games, activity sheets — helps teachers establish this link better, says Meena Ganesh.

THE ONLINE ADVANTAGE

All the online players claim that one advantage over physical classrooms is the quality of teachers that the virtual forum offers.

According to Edserv, its tutors are selected through a rigorous interview process. "We check their credentials and students also continuously rate them. There is a team working on this to monitor the quality of the online tutors. We record all the online tuition sessions and have a recap model for students whereby they are able to do self-assessment," Edserv's Giridharan says.

The online players also hold out affordability and flexibility that gives digital learning model an edge. While you may shell out almost Rs 14,000 a year for an hour of algebra classes for a class X student in a city like Delhi, you could get an online tutorial for a year for Rs 2,000, says a Delhi-based parent who uses one such solution — Topper Learning.

And there are flexible pricing options as well. In the case of EdServ, while live online tuition could cost Rs 30 per hour, recorded eLearning sessions could cost Rs 5 per hour. "Everyday, we are seeing newer students register on lampsglow.com from tier-II/III towns," says Giridharan.

But for technology, these students in remote places would have been deprived of quality tutoring, he notes.

GROWING ONLINE LEARNERS

So is digital learning finally picking up in India? At least the numbers seem to suggest so. Educomp's WiZiQ today has 1.2 million students and over a lakh teachers registered on the platform. "Clearly WiZiQ is on a roll," Prakash told analysts recently.

EdServ's web platform www.lampsglow.com has a student base of one lakh. EdServ provides online tests almost everyday. There are over 80 batches every evening, between 5 p.m. and 9 p.m. The company wants to expand online tuition sessions to 800 batches every day over a period of time.

Pearson's DigiClass reaches out to more than seven lakh students every day. The company's assessment and testing programmes help to educate more than 100 million people worldwide. "We combine content and technology and offer customised solutions of international standards to audiences not just in India but worldwide," says Pearson's Meena Ganesh.

Everonn reaches out to over three million students through VITELS. Revenue for Everonn, through VITELS, increased by nearly 50 per cent to Rs 216 crore in 2010-11 compared with Rs 146 crore in the previous year. It reported total revenue of Rs 302 crore in 2010-11 (Rs 211 crore), according to the company's 2010-11 annual report.

With a growing number of students clicking in to eLearning portals, the virtual classrooms are finally coming alive in India.

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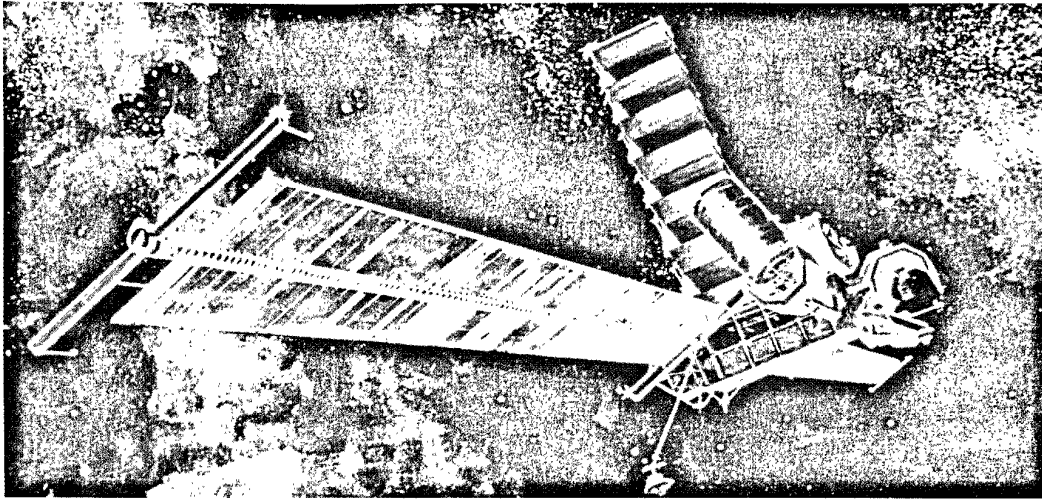
► The CBSE has advised all its affiliated schools to set up at least one ICT-enabled classroom for each grade, from I through XII.

Huma Siddiqui

ISRO

Outsourcing with confidence

The Indian space agency is looking to outsource complex aerospace systems and design services to private suppliers, reasoning that this is the best way to speed up rocket development and to save money



INDIAN Space Research Organisation (ISRO) is in for major changes and outsourcing seems to be the buzzword nowadays. Until now, the space agency concentrated on developing capability to build and launch communication satellites for television broadcast, telecom and meteorological applications; remote sensing satellites for management of natural resources. And it outsourced smaller work to private players. But in a clear departure from the past, ISRO has expressed its intention to significantly scale up outsourcing of high-end work to private companies—from building more complex systems to assembling it.

It is obvious that the private industry is eager to play a larger role in the space missions and tap the outsourcing work offered by the department of space, of which ISRO is part, which has an annual budget of ₹5,700 crore for 2011-12. ISRO has huge spending plans for missions to Mars and various domestic and international satellite launches. Firms such as L&T, Godrej & Boyce, Astra Microwave, among others, have been associated with the space agency for a number of years.

The rationale is also to fuel the quantum jump in the programmes being undertaken by the space body. "We are getting into a risk-sharing model," says ISRO chairman K Radhakrishnan. Accordingly, the Indian space agency intends to establish a manufacturing complex near the Sriharikota spaceport on the Andhra coast so that its private partners have production there.

At present, more than 500 enterprises from the commercial-aerospace industry account for 60% production of the space agency's programme. These suppliers are located in different parts of the country, and the idea now is to cut down the turnaround time and get the products on time. "Their share would

further go up as we are witnessing a quantum jump in the production of rockets and satellites in the last two-three years," Radhakrishnan adds.

Analysts reckon that ISRO has a unique style of reaching out to the private sector: Unlike space agencies in the

US and Europe, the Indian space agency reaches out to companies with niche skills in the aerospace arena and then commission work to them, instead of private companies approaching them for contracts.

Analysts are also quick to recall the

tragedy faced by ISRO last December when both the communication satellite GSAT-5P and the geosynchronous satellite launch vehicle (GSLV-F06) that was to have put the satellite into orbit from Sriharikota went up in smoke and were not insured. The GSLV-F06 cost ISRO

₹175 crore and GSAT-5P ₹150 crore. The GSLV-D3, which failed on April 15, 2010, also was not insured. It was to have put into orbit the communication satellite GSAT-4, which was not insured either. Hence, the need for more private sector participation to mitigate risks.

Cut to present day, ISRO is in an overdrive and has already launched three satellites this year, and four more spacecraft are getting ready for launch by March next year. In addition, it has already bagged orders to launch 12 foreign satellites on board its polar satellite launch vehicle (PSLV) missions. So far, it has launched 26 foreign satellites by the home-grown PSLV. These satellites were mainly Canadian, German and Indonesian, including a 800-kg spacecraft—environment monitoring satellite—from DLF Germany.

Meanwhile, the development work on GSLV MkIII is progressing during 2012. The GSLV Mk III is conceived and designed to make ISRO fully self-reliant in launching heavier communication satellites of INSAT-4 class, which weigh 4,500 to 5,000 kg. The vehicle envisages multi-mission launch capability for GTO, LEO, Polar and intermediate circular orbits. GSLV MkIII is designed to be a three-stage vehicle with a lift-off mass of 630 tonnes. The booster stage comprises two identical S-200 large solid boosters with 200 tonnes of solid propellants that are strapped on to the L-110 core liquid stage. The upper stage is the C25 cryogenic stage.

A study for undertaking human space flight to carry human beings to low earth orbit and ensure their safe return has also been made by ISRO. The space agency has initiated pre-project activities to study technical and managerial issues related to undertaking manned mission with an aim to build and demonstrate the country's capability. The programme envisages the development of a fully autonomous orbital vehicle carrying two or three crew members to about 300 km low earth orbit and their safe return. With private companies maturing, it is obvious that they will be getting more critical work from ISRO in future.

आईआईटी में पाढ़िए और डॉक्टर बनिए

स्वाति गर्ग

भारतीय प्रौद्योगिकी संस्थान (आईआईटी) खड़गपुर में चिकित्सा विज्ञान और प्रौद्योगिकी से जुड़े अध्ययन के लिए एक मेडिकल स्कूल की स्थापना का सपना अब जल्द ही हकीकत में बदल सकता है। इसके लिए आईआईटी अधिनियम में संशोधन की जरूरत है। अच्छी खबर यह है कि आईआईटी अधिनियम संशोधन विधेयक को 1 अगस्त से शुरू हो रहे संसद के मॉनसून सत्र में पेश किए जाने की उम्मीद है। इस विधेयक के पास हो जाने के बाद देश के सबसे पुराने प्रौद्योगिकी संस्थान में चिकित्सा स्कूल खोले जाने को लेकर सारी बाधाएं दूर हो जाएंगी।

इस संबंध में आईआईटी खड़गपुर के एक प्रोफेसर ने कहा, 'मानव संसाधन मंत्रालय से जुड़े एक वरिष्ठ अधिकारी ने बताया है कि आईआईटी अधिनियम में संशोधित विधेयक को संसद के मॉनसून सत्र में पेश किए जाने की उम्मीद है। विधेयक पास हो जाने

के बाद इस प्रौद्योगिकी संस्थान में मेडिकल स्कूल की स्थापना का रास्ता साफ हो जाएगा। आईआईटी के अंतर्गत मेडिकल स्कूल की स्थापना हमारी 20 प्राथमिकता वाली सूची में शामिल है।'

देश के शीर्ष प्रौद्योगिकी संस्थान आईआईटी का संचालन भारत सरकार के मानव संसाधन विकास मंत्रालय (एमएचआरडी) द्वारा आईआईटी अधिनियम के तहत किया जाता है। फिलहाल यह अधिनियम आईआईटी को चिकित्सा शिक्षा जैसे क्षेत्र में उतरने की अनुमति नहीं देता है। ऐसा तभी संभव है जब आईआईटी अधिनियम इसके लिए पर्याप्त संशोधित किए जाएं। उन्होंने कहा कि इस संबंध में आईआईटी खड़गपुर का आवेदन अब तक मानव संसाधन विकास मंत्रालय में लटका हुआ है। इसका कारण यह है कि आईआईटी में मेडिकल स्कूल खोले जाने को लेकर एचआरडी मंत्रालय और स्वास्थ्य मंत्रालय आमने-सामने हैं। देश में स्वास्थ्य शिक्षा से संबंधित संस्थानों का नियमन भारतीय चिकित्सा परिषद् (एमसीआई) द्वारा किया

पूरा होगा सपना

■ आईआईटी खड़गपुर में मेडिकल स्कूल खोलने के लिए करना होगा आईआईटी अधिनियम में जरूरी संशोधन

■ सूत्रों के मुताबिक यह संशोधन विधेयक संसद के मॉनसून सत्र में पेश होने की उम्मीद

जाता है। स्वास्थ्य मंत्रालय का मानना है कि चूंकि मेडिकल स्कूल की स्थापना स्वास्थ्य शिक्षा से संबंधित है ऐसे में यह मामला एमसीआई के अधिकार क्षेत्र में आता है। हालांकि एचआरडी मंत्रालय में मामले से जुड़े किसी अधिकारी का बयान उपलब्ध नहीं हो पाया है।

आईआईटी खड़गपुर के उप निदेशक ए के मजूमदार का कहना है, 'भारत में अब चिकित्सा शिक्षा से संबंधित किसी भी प्रकार की डिग्री के लिए एमसीआई से अनुमति लेने की जरूरत होती है। हम

एमसीआई द्वारा उठाए जा रहे सवाल और चिंताओं का जवाब देने के लिए तैयार हैं। उम्मीद है कि आईआईटी अधिनियम में संशोधन विधेयक जल्द की पारित हो जाएगा। इसके बाद इस तरह से जुड़ी चिंताओं का स्वतः ही समाधान हो जाएगा।'

देश के सबसे पुराने इस प्रौद्योगिकी संस्थान में मेडिकल स्कूल खोले जाने को लेकर पिछले दशक से ही जमीन तैयार की जा रही है। इसने वर्ष 2001 में ही चिकित्सा विज्ञान और प्रौद्योगिकी की स्थापना की थी। आईआईटी खड़गपुर की स्थापना वर्ष 1951 में हुई थी।

मजूमदार ने कहा, 'चिकित्सा विज्ञान और प्रौद्योगिकी के क्षेत्र में हम पहले से ही बहुत काम कर चुके हैं। शुरुआत में यह पोस्ट ग्रेजुएट स्तर की पढ़ाई उपलब्ध कराता है जहां अंतरराष्ट्रीय स्तर के अनुसंधान के लिए एमबीबीएस डॉक्टरों को प्रशिक्षित किया जाता है।' टेलीमेडिसिन रिसर्च और प्रौद्योगिकी उपकरणों तथा चिकित्सा संबंधी सॉफ्टवेयर आदि को लेकर भी काम किया गया है।

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सवाल-जवाब डेविड ए विल्सन, अध्यक्ष एवं सीईओ, जीएमएसी

जीमैट छात्रों की संख्या होगी दोगुनी



ग्रेजुएट मैनेजमेंट एडमिशन काउंसिल (जीएमएसी) का मानना है कि भारत के बिजनेस स्कूलों द्वारा नामांकन प्रक्रिया में जीमैट फॉर्मेट अपनाए जाने से जीमैट छात्रों की संख्या में भारी इजाफा होने वाला है। अगले 4 साल में इसकी संख्या दोगुनी हो जाने का अनुमान है। जीएमएसी के अध्यक्ष और सीईओ डेविड ए विल्सन ने भारत में इसके विस्तार के संबंध में प्रवीण बोस और प्रदीप चंद्रन से बातचीत की। यहां प्रस्तुत है उनसे बातचीत के प्रमुख अंश...

भारतीय बाजार में तेजी को आप किस रूप में देखते हैं?

भारत में जीएमएसी के लिए पिछले पांच साल बेहद महत्वपूर्ण रहे हैं। इस दौरान इसमें काफी बदलाव भी आए हैं। वर्ष 2006 से लेकर 2010 तक बिजनेस स्कूलों के लिए प्रवेश परीक्षा में सम्मिलित होने वाले छात्रों की संख्या तकरीबन दोगुनी से भी ज्यादा बढ़ी है। वर्ष 2011 के पहले चार माह में ही पिछले साल इसी अवधि की तुलना में 10 फीसदी ज्यादा छात्रों ने इसमें हिस्सा लिया।

यहां तक कि पिछले पांच साल के दौरान जीमैट में शामिल होने वाले भारतीय छात्रों की संख्या एशिया भर में सबसे ज्यादा है।

भारत में जीमैट में सम्मिलित होने वाले छात्रों की दिन प्रति दिन बढ़ती संख्या के पीछे आप क्या कारण मानते हैं?

छात्रों की संख्या बढ़ने के पीछे तीन प्रमुख कारक हैं। भारत की मूल्य व संस्कृति ऐसी रही है कि जो यहां के लोगों को उच्च शिक्षा, तकनीक,

अत्याधुनिक तकनीक के संचालन और उद्यमशीलता के लिए प्रेरित करती है। इसके अलावा यह भी देखा जा रहा है कि यहां के लोगों में उच्च स्तरीय अध्ययन की प्रवृत्ति तेजी से विकसित हो रही है। यही कारण है कि यहां भारी संख्या में अच्छे बिजनेस स्कूल मौजूद हैं। जीएमसी छात्रों को वैश्विक स्तर के बिजनेस स्कूलों में दाखिला के लिए एक अच्छा मंच उपलब्ध कराता है। जीमैट छात्रों को ढेरों विकल्प देता है।