# Newspaper Clips
## February 27, 2015

## Times of India ND 27/02/2015  P-8

# Centre likely to show-cause DU VC soon

## HRD Seeks Prez Nod For Order

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**New Delhi:** The HRD ministry has sought the approval of the President for a show-cause notice that it intends to send to Delhi University vice-chancellor Dinesh Singh on the controversial four-year undergraduate programme and some other issues.

As the President is the university's Visitor, his formal nod is required for the notice to be served, a highly-placed ministry source said. He said the VC would be asked to explain the manner in which the FYUP was introduced. (The four-year programme has since been scrapped at the instance of the HRD ministry.) If the VC's explanation isn't satisfactory, he might even be asked to go.

**UNDER THE GUN**

The show-cause notice comes in the wake of the President's office putting certain queries to the VC after a reference was made to it by the HRD ministry. The sources said the show-cause notice is likely to list certain issues on which the vice-chancellor's explanation would be sought.

The likely queries to the VC, said the sources, would include questions on why FYUP was launched in 2013 without the mandatory clearance from the Visitor's office. It would also ask why the HRD ministry was also kept in the dark. As FYUP was "patently illegal" in the absence of these formal clearances, the VC would be asked why the future of around 60,000 students was put in jeopardy.

The notice is likely to seek explanations on the BTech courses which were started by DU without clearance from the All India Council for Technical Education. Ministry sources said colleges that didn't have the infrastructure to run engineering courses were told that AICTE approval would be taken on their behalf by the university administration. But that was not done.

The notice may also refer to the alleged diversion of funds—to the tune of Rs 172 crore—meant for OBC students in university departments and colleges to buy laptops.

Tribune ND 27/02/2015    P-15

# IITs roped in to improve pilgrims' palanquins

**TRIBUNE NEWS SERVICE**

**JAMMU, FEBRUARY 26**

The Rural Technology Action Group (RuTAG) chapter established at Jammu University has initiated work on various problems on improvement in 'palkis' (palanquins) for carrying pilgrims to Vaishno Devi and Amarnath shrines and collection and disposal of mule dung along the tracks.

The problems were identified in the meeting organised in December last year under the chairmanship of Governor NN Vohra. The meeting was attended by Dr R Chidambaram, Principal Scientific Adviser to the Government of India. In his earlier discussions, he had informed the Governor about RuTAG.

The meeting was attended by representatives of both state and private universities and other institutions which were interested therein.

A number of proposals were identified like recharge of springs in hilly areas of the state and development of hybrid 'bukharis' (used for heating purposes) in colder regions of the state.

The project for the improvement of 'palki' design would be jointly taken up by the IITs in Delhi and Mumbai and the National Institute for Industrial Engineering in Mumbai.

The project for improved disposal and biogas production from mule dung on the Vaishno Devi yatra track would be jointly taken up by the ICAR, the National Research Centre on Equines in Bikaner, NEERI and the SMVDSB. The project for recharge of dried springs in Rajouri would be taken up by the Himalayan Environmental Studies and Conservation Organisation, the University of Jammu, BARC and Baba Ghulam Shah Badshah University in Rajouri.

The project for the development of hybrid 'bukharis' would be jointly taken up by the IIT in Delhi, the DRDO and the University of Kashmir.

Asian Age ND 27/02/2015 P-2

# Malaviya Chair at BHU for rail tech

**AGE CORRESPONDENT**
**NEW DELHI, FEB. 26**

Railway minister Suresh Prabhu on Thursday proposed to set up a "Malaviya Chair" for Railway Technology at IIT (BHU) and announced that the railways intends to set up an innovation council called "Kayakalp" for the purpose of business re-engineering and introducing a spirit of innovation in the public sector.

"Government of India has conferred a Bharat Ratna on Pandit Madan Mohan Malaviya. To mark the centenary celebrations of Banaras Hindu University, we propose to set up a Malaviya Chair for Railway Technology at IIT (BHU), Varanasi.

This chair will help in development of new materials to be used in all assets of the railways," Mr Prabhu said in Parliament.

He announced that the railways has decided to strengthen the RDSO (Research Design and Standards Organisation) to make it one of excellence in applied research. "RDSO would collaborate with institutions of repute. We will set up in 2015-16 four Railway Research Centres in universities for doing fundamental research," Mr Prabhu said.

The railway minister stressed the need to invest in fundamental and applied research for seeking solutions to rail-specific issues.

The railways intends to set up a technology portal to invite innovative technological solutions, he said.

"A consortium of the ministry of railways, ministry of human resources development, ministry of science and technology, and industries, on an investment-sharing model, is being set up."

# Upgrading the calibre of engineering students

With the rapid growth of semiconductors and electronics, the requirement to bridge the narrow the gap in the availability of existing talent is a very important factor. With this in mind, the Institute of Electrical and Electronics Engineers (IEEE), an international professional body, which sets industry standards, has introduced a Blended Learning Programme.

"The Blended Learning Program aims to provide students and professionals the conceptual understanding of semiconductor design with extensive hands-on training. The IEEE Blended Learning Program will help increase the availability of skilled engineers for the rapidly growing Electronic Systems Design and Manufacturing (ESDM) sector in India" says David Goldstein, Lead Director, New Product, IEEE, who was in Bengaluru in January this year.

The blended learning program in VLSI (very large scale integration) employs the latest in applied and immersive e-learning techniques in combination with extensive hands-on practice. This dual in-depth blended learning approach, designed to complement academic learning with training in industrial practices, aims to prepare engineering students and professionals for a successful career in the semiconductor industry.

Goldstein says that in Indian engineering colleges, learning is largely theoretical while ideally, theory and application should be in equal measure. "India needs to develop its own products. The blended learning provides advanced training in industrial practices for the semiconductor industry", he adds.
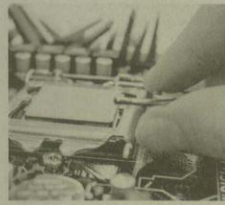
Harish Mysore, Director - India Operations of IEEE, says that the Government-funded Centre for Development of Advanced Computing (C-DAC), which is into supercomputing, capacity building and defining standards in electronics and allied areas, has the same core objectives.

With the blended learning programme in VLSI, students have the convenience of "anytime" learning using an advanced web-based e-learning platform. The courses have been developed by highly experienced professionals in electronic design, and then reviewed by IEEE's leading experts from academia and the VLSI industry. This engaging online learning approach to reinforce core concepts is then coupled with highly effective and proven in-person instruction and hands-on applied training in a lab. VLSI professionals and students build competency and skills necessary to create complex products with the leading EDA tools used in the semiconductor industry. This unique approach provides students the confidence to build a career in the semiconductor field and equips engineering professionals with the skills to quickly become much more productive in their work.

## Programme structure

IEEE Blended Learning Program in VLSI is a series of short courses to cover all key aspects of VLSI. There are two distinct types of courses: Foundational courses on electronics design and specific VLSI design flows designed specifically for undergraduate college students to build a foundation of VLSI concepts and practical skills to succeed in job interviews and prepare them for the semiconductor industry. Fresh recruits starting their career in technology corporations will also greatly benefit from these courses.

Domain-specific courses on VLSI Design and verification techniques for new and experienced employees working in specific sub-domains of VLSI are also fit for students pursuing their postgraduate studies in one of the circuit branches.

For each course, one-third of the course duration is devoted to e-learning while two-third of the course duration is devoted to hands-on work in the lab. What makes the programme unique is that it employs a learning outcomes-based approach at every stage. Its content is industry relevant and has focus on building conceptual understanding and practical skills required to succeed in the semiconductor industry.

The course content has been developed by experts with years of industry experience and with inputs from industry and academia. Leading IEEE experts from the industry and academia review each course material before it is included into a course. The course material is regularly updated to stay current and relevant to the semiconductor industry so that the industry will have the confidence that students and professional enrolled in these courses are likely to have relevant skills and the students will have the confidence to succeed in a career in the semiconductor industry.

## Pedagogical approach

The IEEE Blended Learning program offers a paradigm shift in teaching complex engineering subjects using e-learning. It is designed to serve as a personal classroom for each learner in a very low-stakes environment that allows a learner to review the same material, or solve the same problem as many times as needed to understand the concept clearly.

The pedagogical approach can be mapped to various levels defined in Bloom's taxonomy: Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation. However, the instructional design (ID) approach used is derived from a keen understanding of techniques for most effective teaching. These principles include: Focus on "What, Why, and How":

Each concept in the course is explained to answer the following three questions: What is a concept, similar to a definition? How to apply or implement a concept? Why is this concept relevant?

**Class participation and concept checks:** The instructional design approach is designed to make the learner a very active participant in his/her learning in multiple ways:

■ Each concept is followed by a short interactive concept check exercise to give the learner an opportunity to check his/her understanding.

■ At various points in e-learning, the notion of class participation is explicitly incorporated. In this approach, the learner must interact and engage with the content by providing input as part of the "lecture" component.

**Points to remember:** Key takeaways are provided for most pages in the course to help a learner remember the most important ideas.

**Context sensitive glossary:** To provide learners with easy access to key definitions.

**Principle of "Hint, explain, and demonstrate":** This approach is applied during the guided practice sessions in e-learning. It works as follows:

■ A learner can click on "Hint" if s/he does not clearly understand the problem to get started.

■ If the learner cannot solve the problem, s/he is shows the explanation of the correct solution.

■ If the learner still does not clearly understand how to solve the problem, a demonstration of each step required to solve the problem is presented to the learner.

**Audio lecture:** To accommodate learners with different abilities, interest, or background knowledge, an audio lecture is also included in the e-learning. It contains additional detail about the topic of a page that learners can listen to but is not required to understand the material.

**Hands-on labs:** The hands-on labs are coupled with the e-learning course material to provide extensive experience in applying concepts to practise using latest EDA (electronic design automation) tools. In addition, the lab instructors have extensive experience in the industry.

**Assessments:** The programme includes a test at the end of each course. The adaptive test automatically determines the next question presented to a learner based upon how previous questions have been answered. These assessments are designed to test the key skills required in the industry such as analysis, problem solving, and application of concepts. The assessments also are designed to help prepare students and professionals to succeed in job interviews by focusing on skills hiring managers look for in candidates.

**Performance and content analytics:** The advanced blended learning platform captures detailed learner behaviour during the e-learning component in the following dimension. The data points provide valuable feedback to the learner about his/her performance and use of the system. The data also provides other key insights.

**Michael Patrao**

# World's first 3D-printed jet engine created

## Breakthrough By Oz Researchers Can Lead To Cheaper, Lighter & More Fuel-Efficient Planes

**Sydney:** Australian researchers unveiled the world's first 3D-printed jet engine on Thursday, a manufacturing breakthrough that could lead to cheaper, lighter and more fuel-efficient jets.

Engineers at Monash University and its commercial arm are making top-secret prototypes for Boeing Co, Airbus Group NV, Raytheon Co and Safran SA in a development that could be the saviour of Australia's struggling manufacturing sector.

"This will allow aerospace companies to compress their development cycles because we are making these prototype engines three or four times faster than normal," said Simon Marriott, chief executive of Amaero Engineering, the private company set up by Monash to commercialize the product.

Marriott said Amaero plans to have printed engine components in flight tests within the next 12 months and certified for commercial use in next two to three years.

Australia has the potential to corner the market. It has one of only three of the necessary large-format 3D metal printers in the world — France and Germany have the other two — and is the only place that makes the materials for use in the machine.

It is also the world leader in terms of intellectual property (IP) regarding 3D printing for manufacturing.

"We have personnel that have 10 years experience on this equipment and that gives us a huge advantage," Marriott said over phone from the Avalon Airshow outside Melbourne.

3D printing makes products by layering material until a three-dimensional object is created. Automotive and aerospace companies use it for producing prototypes as well as creating specialized tools, moldings and some end-use parts.

Marriott declined to comment in detail on Amaero's contracts with companies, including Boeing and Airbus, citing commercial confidentiality. Those contracts are expected to pay in part for the building of further large format printers, at a cost of around A$3.5 million ($2.75 million) each, to ramp up production of jet engine components.

3D printing can cut production times for components from three months to just six days.

Ian Smith, Monash University's vice-provost for research, said it was very different to the melting, moulding and carving of the past.

"This way we can very quickly get a final product, so the advantages of this technology are, firstly, for rapid prototyping and making a large number of prototypes quickly," Smith said.

"Secondly, for being able to make bespoke parts that you wouldn't be able to with classic engineering technologies." REUTERS

**AVIATION HISTORY:** The 3D-printed jet engine on display at an air show outside Melbourne

## Business Line ND 27/02/2015  P-14

# Technology to be tapped for better services

Pradeesh Chandran

**BENGALURU:** Railway Minister Suresh Prabhu's maiden budget offers a lot of hope to the IT and telecom sectors as the Ministry taps technology to enhance the efficiency of the rail sector.

Some of the measures he announced are 24X7 helpline number 138 and toll-free number 182 for security-related complaints.

Commenting on the budget, Prime Minister Narendra Modi tweeted: "I am particularly delighted that for the 1st time, there is a concrete vision for technology upgradation & modernisation of the Railways."

Mr. Prabhu said in his speech: "The Railways will develop a multi-lingual e-portal and will offer unreserved tickets on smartphones and Wi-Fi will be provided at B category stations." About Rs. 5,000 crore has been earmarked for information technolo-



*Suresh Prabhu has earmarked Rs. 5,000 crore for information technology, and research.*

gy, and research.

Another major technological advancement is the introduction of hand-held terminals to travelling ticket examiners (TTEs) for verification of passengers and downloading charts.

Travellers can order food and disposable bed rolls through the IRCTC website at the time of booking tickets.

The Railways are also planning to introduce on-

board entertainment on select Shatabdi trains on licence fee basis.

Apart from these, they will add surveillance cameras on a pilot basis in selected mainline coaches and ladies' compartments of suburban coaches without intruding into privacy.

The Ministry plans to use the power of IT to provide information on latest berth availability, station navigation system, bar coded/RFID tracking of par-

cels and freight wagons, and automated parcel warehouses among others.

It will introduce a centrally-managed Railway Display Network in over 2000 stations in the next two years. Mr. Prabhu also emphasised on the need for collaboration with institutes to develop technology and innovation for the improvement of Railways.

The Railways are planning to work with IIT-Kanpur to design a project based on radio signal for warnings at unmanned level crossings.

Other proposals are research centres in select universities for fundamental research and 'Malaviya Chair' for Railway Technology at IIT (BHU), Varanasi. Also, an innovation council called "Kayakalp" for business re-engineering and introducing a spirit of innovation in the Railways is planned. A technology portal to invite innovative solutions is another proposal.

**DIGITAL FACELIFT**

# How technology is helping build a modern, secure Indian Railways

**Govt unveils measures including online data on berth availability, an integrated mobile app and parcel tracking**

BY LESLIE D'MONTE
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MUMBAI

The government is promising to use technology to give the old-economy Indian Railways a much-needed digital facelift and transform it into a more modern, secure and consumer-friendly service over the next five years—all integral moves to making a Digital India.

On Thursday, among other things, railway minister Suresh Prabhu spoke of soon unveiling an information technology (IT) vision for the railways, which will include online information on the latest berth availability on running trains and an integrated mobile application including a station navigation system, besides customer-friendly freight movement initiatives such as introduction of barcoded/RFID (radio frequency identification) tracking of parcels and freight wagons, automated parcel warehouses and a customer relationship management system.

Of the cumulative ₹8.5 trillion proposed investment plan from 2015-19, ₹5,000 crore has been dedicated to IT and research.

## IT VISION FOR THE RAILWAYS

- Online information on latest berth availability on running trains; an integrated mobile application that includes a station navigation system.
- Freight movement initiatives such as barcoded/RFID tracking of parcels and freight wagons, automated parcel warehouses.
- Paperless hand-held terminals will be provided to travelling ticket examiners (TTEs) for verification of passengers and downloading charts.
- As part of the Digital India initiative, Wi-Fi will be provided at category A and B stations.
- Digitized mapping of land records to prevent any encroachments.
- Using geo-spatial technology to give audio-visual warnings to road users at unmanned level crossings.
- Innovation council called "Kayakalp" to be set up for business re-engineering and introducing a spirit of innovation.

## COMMENTARY

If the Indian government's railway budget speech of 2014-15 mentioned the word technology only once, this time around there were no fewer than 14 mentions, with an entire section dedicated to leveraging technology that also spoke of manufacturing Braille-enabled coaches to help the visually-impaired.

The government made the right digital moves too—right from the presentation of the railways budget as a live webcast to taking questions on Twitter and having a Facebook page, talking about SMS alerts, hand-held terminals for travelling ticket examiners (TTEs) to verify passengers and download charts, a move towards expediting refunds and saving more paper, and, more importantly, talking about

putting in place an integrated customer portal to serve as a single interface for customers to access different services.

There are plans to offer an SMS alert service to inform passengers in advance about the arrival and departure time of trains at starting or destination stations; install surveillance cameras on a pilot basis in selected mainline coaches and ladies' compartments of suburban coaches "without compromising on privacy" in order to provide more security to women; provide mobile phone-charging facilities in general class coaches; and Wi-Fi services at more stations.

The government also hopes to have a centrally-managed railway display in place at over 2,000 stations over the next two years in order to promote its Digital India campaign and for "unlocking huge advertising rev-

enue potential".

The minister added that the government will continue to pursue with vigour special projects such as a high-speed rail between Mumbai and Ahmedabad. "The feasibility study for this is in advanced stage and report is expected by the mid of this year. Regarding the other high speed routes on the diamond quadrilateral, studies are being commissioned."

The diamond quadrilateral is a plan to connect Delhi, Mumbai, Chennai and Kolkata by high-speed rail.

In terms of safety, the ultimate objective, according to Prabhu, is to eliminate all unmanned level crossings and replace them with road over and under bridges.

In the short term, the Research Designs and Standards Organisation (RDSO) has been asked to develop a suitable

device with a reliable power supply system based on theft-proof panels/batteries in consultation with Indian Space Research Organization (Isro), using geo-spatial technology for providing audio-visual warning to road users at unmanned level crossings. Further, a radio-based signal design project has been taken up with the Indian Institute of Technology (IIT) Kanpur for warnings at unmanned level crossings.

From a strategic point of view, the government has stated its intention to set up an innovation council called Kayakalp for the "purpose of business re-engineering and introducing a spirit of innovation in railways".

Ashok Chandak, chairman of the India Electronics and Semiconductor Association (IESA), said the steps outlined by the railway minister "will motivate the electronics industry and bring cheers to the travellers through technology integration. The budget will also boost entrepreneurship in the electronics with the ministry focusing on new-age technologies through Kayakalp to ensure enhanced passenger safety and security, customer service and trade management. We also foresee this railway budget to motivate design-led electronics manufacturing in India, with innovations and technology leading the growth of Indian Railways."

Modernization is an ongoing task. On 8 July 2014, too, the government in its railway budget had proposed bullet trains, bio-toilets, ultrasonic fixes for railway tracks, GIS (geographic information system) mapping, digitization of railway land, Wi-Fi connectivity at select stations and in trains, logistics support for e-commerce companies and going paperless in five years.

In its *Vision 2020: Telecom*

*Implementation Plan* January 2010 report for the ministry of railways, the Indian Railways spoke about tapping the revenue generation potential in the telecom and IT sector, using the 64,000km-long right of way for laying optical fibres, signalling towers and other infrastructure assets that railways owns.

This was to be done in collaboration between the **RailTel Corp. of India Ltd** and private sector companies in a transparent framework. The proposals were under the consideration of an information and communication technologies expert committee headed by Sam Pitroda for expanding the RailTel business.

But, then, it was the Congress-dominated United Progressive Alliance (UPA) party in power at the centre, and Pitroda quit as chairman of the National Innovation Council (NIC) in June 2014 after the UPA lost the general election.

Since 1964, many countries have developed high-speed rail to connect major cities. These countries include Austria, Belgium, the UK, China, France, Germany, Italy, Japan, Poland, Portugal, Russia, South Korea, Spain, Sweden, Taiwan, Turkey, the US and Uzbekistan, Peter Wilkinson, a director of SamWilko Advisory, noted in a 13 January note.

Wilkinson argued that high-speed passenger rail represents a prime opportunity for nation building. He cited the example of China's high-speed rail plans to invest $300 billion to build a 30,000km network as the largest, fastest and most technologically advanced high-speed railway system in the world by 2020.

India's rail system may still be a far cry from that of China's, but it is taking the right steps towards building such a system.

# Startup led by IIT-ian duo set to become 'billion $ baby'

**Ramsurya Mamidenna**

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**MUMBAI:** It was the middle of 2008. For the umpteenth time, Seclore founders Abhijit Tannu and Vishal Gupta were giving finishing touches to a presentation on their new company's first product FileSecure. Their client was a senior executive in Reliance Capital.

The two were nervous. "We had some bad experiences. Of the many clients we spoke to, none had shown any real interest as they thought it was not possible... it was fiction," recalled Tannu in his office in Andheri in suburban Mumbai, as a group of youngsters flitted around. "We wanted to be right this time, but how?"

He is referring to a product that has changed the way companies world over guard confidential information.

It has also, within five years, catapulted Seclore into becoming one of the three big technology firms to have been selected by TiE (The Indus Entrepreneurs). The other two in the race included Delhi-based Vinculum Group, a tech provider for the retail industry and Pune-based Sokrati Technologies, an analytics firm.

TiE is an entrepreneurship trade body that spots billion dollar companies from start-ups and mentors them into global firms. Under the programme, Indian companies will be given office space and also supporting systems to grow their business in the US. One of the founders will move to Silicon Valley temporarily and will be mentored by senior tech executives from SAP, Microsoft, and Salesforce Inc.

The recognition by TiE is a big boost for Seclore.

"Today we have presence in 23 countries in the UK, the Netherlands, Germany and in other geographies," said Tannu. With over three million users across 300 enterprises, the clientele is big; from Taipei Police to state bodies in the Netherlands.

But in 2008, the idea was being laughed at. "How can you control data that is residing in someone else's computer? That is impossible," was the frequent reply the two IIT-ians got for their concept.

Vishal, the younger of the two, suggested sending a practical demo before the meeting. They e-mailed the Reliance Capital executive a set of Seclore own documents and asked him to open it through Reliance Capital systems. The executive tried, but failed after multiple attempts. A second set of socuments sent also met with the same fate. Now, Reliance Capital was interested.

Slowly word spread about FileSecure and by 2009, the company was a hit.

The "billion dollar baby", as TiE voted Seclore, is a simple concept: developing security that not only ring fences targeted content, but travels with the content irrespective of the medium and protects it from unauthorised access even over multiple usage.

"Traditionally security software was perimeter driven. There was no control over the information once it left the initial perimeter," said Tannu, a chemical engineering graduate from IIT Kharagpur. "Our software allows you to share the same information among multiple users but you continue to retain control."

Seclore's product secures data over different devices including mobiles, laptops, tablets or hi-tech computers, or even on the cloud.

Seclore was founded in 2008 by the two — Gupta, 36, is the CEO, while Tannu, 42, is the CTO. Gupta is an IIT Bombay pass-out.

The two met in 2000 and shared a common interest — devising technology that will aggregate data. Their first venture was Herald Logic, which was incubated at IIT Bombay, and is now a market leader in sales and channel management. After selling off Herald Logic, the two again incubated their second idea with IIT Bombay's Society for Innovation and Entrepreneurship.

PRATHAM GOKHALE/HT

> WE HAD SOME BAD EXPERIENCES. OF THE MANY CLIENTS WE SPOKE TO, NONE SHOWED ANY REAL INTEREST... THEY THOUGHT IT WAS FICTION

ABHIJIT TANNU, CEO, Seclore

## IIT-ians...

Seclore started commercial operations in 2010, but as Tannu said, "we were facing a financial crunch. We had to choose between investors and revenue to raise funds. We chose revenue as we were more comfortable with customers. The seed money came from relatives and friends."

By the time Seclore started tapping investors in 2013, they had a successful enterprise. The company raised $6 million in initial funding last year from Helion Venture Partners and Ventureast Proactive Fund and is planning a second round of $20 million.

How do the founders divide responsibilities? "Vishal is focused on growing the company, while I am interested in technology," said Tannu.

**Economic Times ND 27/02/2015   P-6**

# ET Cases Website Opens up Case Study Files

**Our Bureau**

**Mumbai:** The country's first case clearing house, ET Cases, has launched its website www.et-cases.com to support business schools, companies, research, consulting and publishing firms with a huge collection of learning material.

An initiative of The Times of India Group, ET Cases has partnered with the Case Research Society of India for reviewing all third-party case studies. It also has partnerships with institutions such as IIM Trichy, IIM Raipur, IIT Kharagpur, IIM Kozhikode, FLAME and IMT Nagpur.

The new venture will help students gain access to Indian and international case studies. They will also have access to case spots (video case studies where case authors discuss organisational dilemmas of the company) and case flyers (discussion boards based on articles published in The Economic Times). "The ET Cases website syncs well with our vision of empowering the youth. It covers case studies spanning all the functional and new age management areas and bridges the gap for the type of cases desired by the academic fraternity and corporate world," says Deepak Lamba, president, TimesPro.

The case method of teaching is increasingly becoming an integral part of management pedagogy. However, there has been a paucity of good business cases in Indian context and Indian business schools have been predominantly depending on cases developed by foreign institutes, says Kalyan Guin, dean, Vinod Gupta School of Management, IIT Kharagpur.

"The initiative taken by ET Cases in developing case studies and other associated teaching material in collaboration with premier academic institutes will go a long way towards fulfilling this gap," he adds.

**Times of India ND 27/02/2015  P-25**

# This black hole is 12 billion times bigger than Sun

**Kounteya.Sinha**
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**London:** Astronomers have found the largest black hole till date – as big as 12 billion times bigger and 420 trillion times more luminous than Sun.

An international team of astronomers have found a huge and ancient black hole which was powering the brightest object early in the universe. The black hole's mass is 12.8 billion light years away — the most luminous object ever seen in such ancient space. It's also from just 900 million years after the big bang. The hole was found at the centre of a quasar that pumped out a million billion times the energy of our Sun.

Team member Dr Fuyan Bian from the Research School of Astronomy and Astrophysics at the Australian National University (ANU) said the discovery challenges theories of how black holes form and grow.

In a new study published in on Wednesday, researchers described "a cosmic light that defies convention. It was even detectable with a relatively small telescope, though researchers in China did have to ask for help from astronomers in Chile and the US to get a higher-resolution look.

"Forming such a large

## Water leaks into helmet, but ISS spacewalker safe

A spacewalking astronaut ended up with unwanted water in his helmet on Wednesday after breezing through a cable and lube job outside the International Space Station. The leak was scarily reminiscent of a near-drowning outside the orbiting complex nearly two years ago. This time, the amount of water was relatively small — essentially a big blob of water floating inside Terry Virts' helmet. In the summer of 2013, another spacewalking astronaut's helmet actually flooded. He barely made it back inside. AP

black hole so quickly is hard to interpret," the team said.

A quasar is an extremely bright cloud of material in the process of being sucked into a black hole. As the material accelerates towards the black hole it heats up, emitting an extraordinary amount of light which actually pushes away material falling behind it.

This process is thought to limit the growth rate of black holes, Dr Bian said. "However this black hole at gained enormous mass in a short period of time," Dr Bian said.

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**Deccan Herald ND 27/02/2015 P-9**

# Digital literacy for digital fluency

By Rupesh Kumar Shah

There are two areas of knowledge that must be acquired in order to leverage technology in learning. The first area concerns itself with what we call digital literacy, i.e. an introduction to the verbal, physical and functional attributes of available technology whether in the form of hardware or software.

The second relates to the development of digital fluency, which is the ability to independently repurpose the use of a piece of available technology in order to meet one's shifting needs. The latter is integral in creating life-long learners, and is indisputably a worthwhile product of education.

One of the ways to facilitate a learner's journey toward fluency is to instill in her an understanding of the underlying principles and concepts at hand. For example, with office application tools, encourage platform independence by exploring the rationale for the interface, the icons and menus, and widen creative assumptions by exploring their less obvious uses such as planning and organising. Whereas with programming, why not first establish a grasp of stepwise thinking and the concept of giving directions?

A healthy foundation of conceptual clarity is a prerequisite to digital fluency, and today's educational content must rise to the challenge. Take for instance, the academic curriculum Computer Masti, which was made use at the school level and was specifically developed to achieve this transcendence from literacy to fluency. Educators are beginning to recognise this need, and are looking to such academic programmes for implementation.

Earlier, fluency was described as the ability to respond to shifting needs with agility. It follows then that another prerequisite skill in this case is the ability to recognise needs in the first place, and then to quickly ascertain which from a list of known tech capabilities can produce the required outcome.

This would require a mind that is familiar with different contexts and can think in interconnected ways. What better way to encounter variety than to be exposed to technology against the backdrop of the different disciplines taught at the school level?

Animations for science class, mindmaps and flowcharts to visualise a historical event, web research for a language project, to cite a few permutations. Instructional method that underscores the interconnectedness of disciplines is a closer facsimile of how information is received and how technology is used in real life. Enter the age of technology assisted teaching and learning!

Teaching with technology not only opens a learner's mind to the ways in which tech can be used, but also enhances the way the core subject content is received and internalised. Multimedia tools bring diversity in stimulation through audio, video and interactive components, disrupting the potential monotony of verbal-aural stimuli. Educators must guard against EdTech becoming just another addition to an automated assembly line of a lesson plan.

Whereas content and creative pedagogy form the foundation of effective learning, technology can play a significant part in making lessons more alluring to digital natives, thus increasing the chances of student alertness and participation. In addition, technological solutions to class planning and management are helping to expedite the transformation of the teacher's function, from a "sage" to a "guide" to a "facilitator."

Technology in the form of information and communication tools has seen to it that knowledge has been vastly democratised, available to all, and theoretically accessible by all. The inadequacy of the proverbial four walls of a classroom has been touted for decades. We know that the age-old manner of one-way information transfer is an exercise that engenders rote learning.

Over time, knowledge and life lessons began increasingly to be garnered from a variety of sources, in a myriad ways, unbound by the borders of brick and mortar. This has also meant that other important stakeholders in education, not the least of whom are students and parents, have begun to play – and are now expected to play – more involved roles in the making of the learning experience.

We are now decidedly living a reality in which being a purveyor of knowledge is no longer a monopoly held by adult humans. Such a paradigm asks that we guide learners towards embracing their new role by devising creative ways to equip them with knowledge of available technological tools. Be sure to do the two-step at your school: teach tech, and teach with tech!
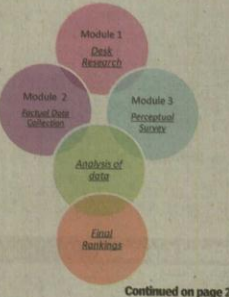
**Times of India ND 27/02/2015   Times B School P-1**

# RESEARCH METHODOLOGY

The objective of this research was to arrive at a list of Top 200 Business schools in India. The research had 3 major modules i.e. Desk Research, Factual survey & Perceptual Rating survey followed by scientifically developed anlaysis & ranking process.

Fieldwork was conducted beginning the 2nd week of December 2014 to 3rd week of January 2015.

Module 1
Desk Research

Module 2
Factual Data Collection

Module 3
Perceptual Survey

Analysis of data

Final Rankings

**Continued on page 2**

For more detailed information about the B-School survey, log on to:
www.timesbschoolsurvey.org

## TOP 1-50 B SCHOOLS

| INSTITUTE/B SCHOOL | RANK |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Xavier Labour Relations Institute, Jamshedpur | 4 |
| Indian Institute of Management, Lucknow | 5 |
| Indian Institute of Management, Kozhikode | 6 |
| Management Development Institute, Gurgaon | 7 |
| Faculty of Management Studies, University of Delhi, Delhi | 8 |
| Amity Business School, Noida | 9 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 10 |
| Indian Institute of Management, Indore | 11 |
| Jamnalal Bajaj Institute of Management Studies, Mumbai | 12 |
| Indian Institute of Foreign Trade, Delhi | 13 |
| SP Jain Institute of Management and Research, Mumbai | 14 |
| Narsee Monjee Institute of Management Studies, Mumbai | 15 |
| Symbiosis Institute of Business Management, Pune | 16 |
| Xavier Institute of Management, Bhubaneswar | 17 |
| International Management Institute, Delhi | 18 |
| Institute of Management Technology, Ghaziabad | 19 |
| Loyola Institute of Business Administration, Chennai | 20 |
| Mudra Institute of Communication, Ahmedabad | 21 |
| Acharya Institute of Management and Sciences, Bangalore | 22 |
| Symbiosis Centre for Management and Human Resource Development, Pune | 23 |
| KJ Somaiya Institute of Management Studies and Research, Mumbai | 24 |
| SIES College of Management Studies, Navi Mumbai | 25 |
| Symbiosis Institute of Management Studies, Pune | 26 |
| TA Pai Management Institute, Manipal | 27 |
| Institute of Management Studies, Ghaziabad | 28 |
| Balaji Institute of Modern Management, Pune | 29 |
| Birla Institute of Management Technology, Greater Noida | 30 |
| Institute of Management, Nirma University, Ahmedabad | 31 |
| Delhi School of Management, Delhi Technological University, Delhi | 32 |
| Christ University Institute of Management, Bangalore | 33 |
| Department of Industrial and Management Engineering, IIT Kanpur | 34 |
| FORE School of Management, Delhi | 35 |
| Indian Institute of Management, Ranchi | 36 |
| Department of Management Studies, Indian Institute of Technology, Delhi | 37 |
| SRM University, Chennai | 38 |
| SCMS Cochin School of Business, Cochin | 39 |
| ITM Business School, Navi Mumbai | 40 |
| Department of Management Sciences, University of Pune, Pune | 41 |
| Institute of Management Study, Kolkata | 42 |
| VIT Business School, Vellore | 43 |
| Great Lakes Institute of Management, Chennai | 44 |
| Goa Institute of Management, Goa | 45 |
| KIIT School of Management, Bhubaneswar | 46 |
| Bharathidasan Institute of Management, Tiruchirapalli | 47 |
| Lal Bahadur Shastri Institute of Management, Delhi | 48 |
| Faculty of Management Studies, Manav Rachna International University, Faridabad | 49 |
| Jagan Institute of Management Studies (JIMS), Rohini, Delhi | 50 |

## TOP 51-100 B SCHOOLS

| INSTITUTE/B SCHOOL | RANK |
|---|---|
| Department of Management Studies, IIT Roorkee | 51 |
| Balaji Institute of International Business, Pune | 52 |
| Jagannath International Management School, Kalkaji, New Delhi | 53 |
| Teerthanker Mahaveer Institute of Management & Technology Moradabad | 54 |
| University School of Management Studies, Guru Gobind Singh Indraprastha University, Delhi | 55 |
| Institute of Finance and International Management, Bangalore | 56 |
| Institute of Rural Management, Anand | 57 |
| FLAME School of Business, Pune | 58 |
| National Institute of Industrial Engineering, Mumbai | 59 |
| Adani Institute of Infrastructure Management, Ahmedabad | 60 |
| NIET Business School, Noida | 61 |
| Prestige Institute of Management and Research, Indore | 62 |
| Institute of Management Technology, Nagpur | 63 |
| Indira School of Business Studies, Pune | 64 |
| Balaji Institute of Telecom and Management, Pune | 65 |
| Balaji Institute of Management and Human Resource Development, Pune | 66 |
| Rajagiri Centre for Business Studies, Cochin | 67 |
| Department of Business Management, Osmania University, Hyderabad | 68 |
| MIT School of Telecom Management, Pune | 69 |
| Indus Business Academy, Bangalore | 70 |
| Shailesh J Mehta School of Management, Indian Institute of Technology, Bombay | 71 |
| Xavier Institute of Management and Entrepreneurship, Bangalore | 72 |
| Fortune Institute of International Business, Delhi | 73 |
| Gitam Institute of Management, Visakhapatnam | 74 |
| Dhanvantary Bharathi Institute of Technology, Hyderabad | 75 |
| Universal Business School, Raigad | 76 |
| Indian Institute of Social Welfare and Business Management, Kolkata | 77 |
| Department of Management Studies Anna University, Chennai | 78 |
| Department of Management Studies, Indian Institute of Technology, Madras | 79 |
| Xavier Institute of Social Service, Ranchi | 80 |
| GL Bajaj Institute of Management and Research, Greater Noida | 81 |
| Faculty of Management Studies, Banaras Hindu University, Varanasi | 82 |
| Indian Institute of Science, Bangalore | 83 |
| NSHM Knowledge Campus, Kolkata | 84 |
| Indian Institute of Forest Management, Bhopal | 85 |
| Motilal Nehru National Institute of Technology, Allahabad | 86 |
| Army Institute of Management, Kolkata | 87 |
| Doon Business School, Dehradun | 88 |
| University Business School, Panjab University, Chandigarh | 89 |
| KIIT School of Rural Management, Bhubaneswar | 90 |
| Department of Management Studies, National Institute of Technology, Durgapur | 91 |
| Jawaharlal Nehru Technological University, Hyderabad | 92 |
| Bharati Vidyapeeth's Institute of Management and Research, Delhi | 93 |
| Institute of Management & Information Science, Bhubaneswar | 94 |
| Institute for Financial Management and Research, Chennai | 95 |
| Institute of Science and Management, Ranchi | 96 |
| Indian Institute of Health Management Research, Jaipur | 97 |
| Institute of Management Studies, Noida | 98 |
| Amrita School of Business, Coimbatore | 99 |
| School of Management, National Institute of Technology, Rourkela | 100 |

## TOP 101-150 B SCHOOLS

| INSTITUTE/B SCHOOL | RANK |
|---|---|
| Andhra University, Vishakhapatnam | 101 |
| DAV Institute of Management, Faridabad | 102 |
| Indian Institute of Management, Rohtak | 103 |
| Indian Institute of Knowledge Management, Chennai | 104 |
| Institute of Business Management and Research, IPS Academy, Indore | 105 |
| Lovely Professional University, Phagwara | 106 |
| Indian Institute of Management, Raipur | 107 |
| Department of Management Studies, Malaviya National Institute of Technology, Jaipur | 108 |
| Birla Institute of Technology & Science (BITS, Pilani), Pilani | 109 |
| BK School of Business Management, Gujarat University, Ahmedabad | 110 |
| Department of Business Administration, University of Lucknow, Lucknow | 111 |
| School of Management, Pondicherry University, Puducherry | 112 |
| Amrut Mody School of Management, Ahmedabad University, Ahmedabad | 113 |
| ITM Business School, Chennai | 114 |
| ICBM School of Business Excellence, Hyderabad | 115 |
| IES Management College and Research Centre, Mumbai | 116 |
| International School of Business and Media, Kolkata | 117 |
| Department of Management Studies, National Institute of Technology, Tiruchirapalli | 118 |
| Chitkara Business School, Chandigarh | 119 |
| Alliance School of Business, Bangalore | 120 |
| International School of Business and Media, Pune | 121 |
| Shri Dharmasthala Manjunatheshwara Institute for Management Development, Mysore | 122 |
| Sri Sai Ram Institute of Management Studies, Chennai | 123 |
| Rajiv Gandhi Indian Institute of Management, Shillong | 124 |
| Symbiosis Institute of Operations Management, Nashik | 125 |
| Indian Institutute of Forign Trade, Kolkata | 126 |
| Dr. VN Bedekar Institute of Management Studies, Thane | 127 |
| Maharaja Sayajirao University of Baroda, Vadodara | 128 |
| Birla Institute of Technology, Mesra | 129 |
| Symbiosis Centre for Information Technology, Pune | 130 |
| Xavier Institute of Management and Research, Mumbai | 131 |
| Meghnad Saha Institute of Technology, Kolkata | 132 |
| Madhusudan Institute of Co-Operative Management, Bhubaneswar | 133 |
| MS Ramaiah Institute of Management, Bangalore | 134 |
| Jaipuria Institute of Management, Lucknow | 135 |
| Prin. LN Welingkar Institute of Management Development and Research, Bangalore | 136 |
| National Institute of Agricultural Extension Management, Hyderabad | 137 |
| International Institute of Professional Studies, Devi Ahilya University, Indore | 138 |
| Dev Bhoomi Institute of Management Studies, Dehradun | 139 |
| Babu Banarasi Das National Institute of Technology and Management, Lucknow | 140 |
| Durgadevi Saraf Institute of Management Studies, Mumbai | 141 |
| University of North Bengal, Siliguri | 142 |
| Regional College of Management, Bhubaneswar | 143 |
| Mody University of Science & Technology, Laxmangarh | 144 |
| ITS Institute of Management, Greater Noida | 145 |
| PSG Institute of Management, Coimbatore | 146 |
| Jain University, Bangalore | 147 |
| Vinod Gupta School of Management, Indian Institute of Technology, Kharagpur | 148 |
| Gandhi Institute of Management Studies, Gunupur | 149 |
| Shanti Business School, Ahmedabad | 150 |

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## TOP 151-200 B SCHOOLS

| INSTITUTE/B SCHOOL | RANK |
|---|---|
| BN College Of Engineering and Technology, Lucknow | 151 |
| Acharya's Bangalore Business School, Bangalore | 152 |
| Department of Management Studies, Indian School of Mines, Dhanbad | 153 |
| Kurukshetra University, Kurukshetra | 154 |
| Kirloskar Institute of Advanced Management Studies, Pune | 155 |
| Indira Gandhi Sahkari Prabandh Sansthan, Lucknow | 156 |
| Institute of Management and Information Technology, Cuttack | 157 |
| Presidency College, Bangalore | 158 |
| Sri Krishna Institute of Management Centre for Excellence in Management Education, Coimbatore | 159 |
| Durgapur Institute of Management & Science, Durgapur | 160 |
| Utkal University, Bhubaneswar | 161 |
| Govindram Seksaria Institute of Management and Research, Indore | 162 |
| Karunya School of Business, Leadership and Management, Karunya University, Coimbatore | 163 |
| St Joseph's Degree and PG College, Hyderabad | 164 |
| ABV- Indian Institute of Information Technology and Management, Gwalior | 165 |
| GRG School of Management Studies, Coimbatore | 166 |
| PES University, Bangalore | 167 |
| JIS School of Management, Kolkata | 168 |
| Suryadatta Institute of Management, Pune | 169 |
| Institute of Business and Computer Studies, Bhubaneswar | 170 |
| Berhampur University, Berhampur | 171 |
| Asia-Pacific Institute of Management, Delhi | 172 |
| School of Management, National Institute of Technology, Warangal | 173 |
| Jaipuria Institute of Management, Noida | 174 |
| Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar | 175 |
| CH Institute of Management and Commerce, Indore | 176 |
| Faculty of Management, Jiwaji University, Gwalior | 177 |
| Fakir Mohan University, Balasore | 178 |
| Sona School of Management, Salem | 179 |
| YMCA University of Science and Technology, Faridabad | 180 |
| Bharati Vidyapeeth's Institute of Management Studies and Research, Navi Mumbai | 181 |
| School of Management, Dr. DY Patil University, Navi Mumbai | 182 |
| Institute of Management Studies, Devi Ahilya University, Indore | 183 |
| MS Patel Institute of Management Studies (FMS), Vadodara | 184 |
| Department of Business Administration, Assam University, Silchar | 185 |
| Krishna Institute of Engineering and Technology, Ghaziabad | 186 |
| Medi-Caps Institute of Technology and Management, Indore | 187 |
| Vidyalankar Institute of Technology, Mumbai | 188 |
| Chetana's Institute of Management and Research,Mumbai | 189 |
| Sanghvi Institute of Management and Science, Indore | 190 |
| Ramaiah University, Bangalore | 191 |
| Institute of Public Enterprise, Hyderabad | 192 |
| Vel Tech Business School, Chennai | 193 |
| Gian Jyoti Institute of Management and Technology, Mohali | 194 |
| Sri Aurobindo Institute of Management & Science, Indore | 195 |
| Himachal Pradesh University Business School, Shimla | 196 |
| Badruka College Post Graduate Centre, Hyderabad | 197 |
| Pioneer College of Management, Kolkata | 198 |
| Dr. Ambedkar Memorial Institute of Information Technology and Management Science, Rourkela | 199 |
| Institute of Rural Management, Jaipur | 200 |

## PARAMETER-WISE RANKING

### Top B Schools (Pedagogy)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Faculty of Management Studies, University of Delhi, Delhi | 6 |
| Amity Business School, Noida | 7 |
| Xavier Labour Relations Institute, Jamshedpur | 8 |
| Management Development Institute, Gurgaon | 9 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 10 |
| International Management Institute, Delhi | 11 |
| Indian Institute of Management, Indore | 12 |
| Loyola Institute of Business Administration, Chennai | 13 |
| Indian Institute of Foreign Trade, Delhi | 14 |
| Jamnalal Bajaj Institute of Management Studies, Mumbai | 15 |

### Top B Schools (Faculty)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 6 |
| Faculty of Management Studies, University of Delhi, Delhi | 7 |
| Xavier Institute of Management, Bhubaneswar | 8 |
| Amity Business School, Noida | 9 |
| Xavier Labour Relations Institute, Jamshedpur | 10 |
| Management Development Institute, Gurgaon | 11 |
| Indian Institute of Management, Indore | 12 |
| International Management Institute, Delhi | 13 |
| Institute of Management Technology, Ghaziabad | 14 |

### Top B Schools (Course Curriculum)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Bangalore | 2 |
| Indian Institute of Management, Calcutta | 3 |
| Indian Institute of Management, Kozhikode | 4 |
| Indian Institute of Management, Lucknow | 5 |
| Xavier Institute of Management, Bhubaneswar | 6 |
| Management Development Institute, Gurgaon | 7 |
| Xavier Labour Relations Institute, Jamshedpur | 8 |
| Faculty of Management Studies, University of Delhi, Delhi | 9 |
| Amity Business School, Noida | 10 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 11 |
| Indian Institute of Management, Indore | 12 |
| Loyola Institute of Business Administration, Chennai | 13 |
| Institute of Management Technology, Ghaziabad | 14 |
| Indian Institute of Foreign Trade, Delhi | 15 |

### Top B Schools (Infrastructure)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Indian Institute of Management, Kozhikode | 4 |
| Indian Institute of Management, Lucknow | 5 |
| Management Development Institute, Gurgaon | 6 |
| Xavier Labour Relations Institute, Jamshedpur | 7 |
| Amity Business School, Noida | 8 |
| Indian Institute of Management, Indore | 9 |
| Faculty of Management Studies, University of Delhi, Delhi | 10 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 11 |
| Loyola Institute of Business Administration, Chennai | 12 |
| Institute of Management Technology, Ghaziabad | 13 |
| International Management Institute, Delhi | 14 |
| Indian Institute of Foreign Trade, Delhi | 15 |

### Top B Schools (Industry Interaction)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Xavier Institute of Management, Bhubaneswar | 6 |
| Amity Business School, Noida | 7 |
| Management Development Institute, Gurgaon | 8 |
| Xavier Labour Relations Institute, Jamshedpur | 9 |
| Faculty of Management Studies, University of Delhi, Delhi | 10 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 11 |
| Indian Institute of Management, Indore | 12 |
| International Management Institute, Delhi | 13 |
| Institute of Management Technology, Ghaziabad | 14 |
| Loyola Institute of Business Administration, Chennai | 15 |

### Top B Schools (Value for Money)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Bangalore | 2 |
| Indian Institute of Management, Calcutta | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Faculty of Management Studies, University of Delhi, Delhi | 6 |
| Xavier Institute of Management, Bhubaneswar | 7 |
| Amity Business School, Noida | 8 |
| International Management Institute, Delhi | 9 |
| Xavier Labour Relations Institute, Jamshedpur | 10 |
| Management Development Institute, Gurgaon | 11 |
| Indian Institute of Management, Indore | 12 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 13 |
| Loyola Institute of Business Administration, Chennai | 14 |
| Indian Institute of Foreign Trade, Delhi | 15 |

### Top B Schools (Placement)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Calcutta | 2 |
| Indian Institute of Management, Bangalore | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Xavier Labour Relations Institute, Jamshedpur | 6 |
| Xavier Institute of Management, Bhubaneswar | 7 |
| Faculty of Management Studies, University of Delhi, Delhi | 8 |
| Management Development Institute, Gurgaon | 9 |
| Amity Business School, Noida | 10 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 11 |
| International Management Institute, Delhi | 12 |
| Indian Institute of Management, Indore | 13 |
| Indian Institute of Foreign Trade, Delhi | 14 |
| Institute of Management Technology, Ghaziabad | 15 |

### Top B Schools (Global Exposure)

| | Rank |
|---|---|
| Indian Institute of Management, Ahmedabad | 1 |
| Indian Institute of Management, Bangalore | 2 |
| Indian Institute of Management, Calcutta | 3 |
| Indian Institute of Management, Lucknow | 4 |
| Indian Institute of Management, Kozhikode | 5 |
| Management Development Institute, Gurgaon | 6 |
| Faculty of Management Studies, University of Delhi, Delhi | 7 |
| Prin. LN Welingkar Institute of Management Development and Research, Mumbai | 8 |
| International Management Institute, Delhi | 9 |
| Indian Institute of Management, Indore | 10 |
| Amity Business School, Noida | 11 |
| Xavier Labour Relations Institute, Jamshedpur | 12 |
| Indian Institute of Foreign Trade, Delhi | 13 |
| Institute of Management Technology, Ghaziabad | 14 |
| Loyola Institute of Business Administration, Chennai | 15 |