CHETAN BHAGAT 
BACK AT IIT-DELHI

Best-selling author Chetan Bhagat was back at his alma mater, IIT-Delhi, to deliver a lecture ‘From Institute to Bollywood,’ organised by the IIT-Delhi Alumni Association in the campus recently. Addressing a jam-packed audience, the author of six blockbuster books said that his mission is to put the society on path of progress through entertainment.
NITs can be engines of economic growth

Arun Kumar Jain

The RIME minister Narendra Modi's 'make in India' call has set an important strategic direction for the country's businesses, policy-makers, and regulatory agencies. It has helped generate a healthy debate as to where the country lags. That, in turn, pulls back productivity and competitiveness of our manufacturing enterprises. To start with, the government wants to ease regulation and do away with obsolete rules to improve the 'doing business in India' rank from the current 100+ position to a relatively healthy 50. How much it succeeds will be keenly observed.

One of the biggest groups of intellectual assets the country has built over decades is the 30 National Institutes of Technology (NITs) — about one in each state. These institutes have created a large pool of well-qualified technical and engineering force, which over the decades, has provided bulk of engineers to PSUs, railways, armed forces, private sector engineering companies, and state departments such as irrigation, electricity, housing and construction.

NITs are uniquely positioned to remove the various divides so glaring in the country, and at the same time, contribute substantially to the growth of Indian GDP. For example, one of the mandates of each NIT is to admit 50 per cent students from within the 'local' state. This single commandment has the power to provide access to quality technical knowledge to students coming from the remotest geographic corners of the country. With intelligent use of technology and launch of missionary programmes, NITs can help bridge the digital divide, income asymmetries, and rural-urban differentiation in the country. One third of the country lives in abysmal poverty, below poverty line. NITs can be the connecting force between rural innovations, local employment, and world-class manufacturing.

There are at least two areas where NITs can substantially increase their contribution to national asset creation. First, for some reasons, NITs have not been able to either do justice to their economic potential or keep pace with the technological developments in the world. Instead of action labs where students are encouraged to experiment with cutting-edge technologies under high-quality mentors, NITs have remained steeped in traditional teaching and lecturing of courses. NITs can look at local innovations and convert the 'juagad' into patentable products that can benefit mankind — alternative sources of energy, low-cost housing and transportation, and collaboration with local hospitals to provide cheap and effective gadgets and solutions.

Secondly, many NITs have excellent labs which can produce huge wealth for themselves and for the country. In western countries (including the US), many fundamental and game-changing researches have come out from labs where the academic programmes are student-centric and in active support and collaboration with the industry. Some recent examples of engineering-technological-industry research collaboration are genetic algorithms, 3D printing, large-scale manufacture of graphene, new and advanced materials for solar power generation (such as calcium titanium oxide also known as perovskite), interdisciplinary work between computer sciences and biology leading to neural networks, just to name a few. (Unfortunately, our NITs and IITs have not even begun work in most of these areas largely due to the missing research and industry interfaces).

While the focus of 'made-in-India' is to establish India as a world-class manufacturing base, the lofty goals require a sumptuous delivery of engineers and technical staff capable of providing solutions to tough scientific problems. This can be achieved only if the faculty can engage and excite the students with real-life problems rather than bland classroom lectures which can become too predictable and mechanical (no pun intended) within a few minutes. In many NITs, lack of funds has taken a toll even in terms of basic upkeep of infrastructure, machinery, and neglect of lab equipment. NITs have also suffered from politicisation and old-fashioned bureaucratic rules which no one wants to make an effort to remove. These are serious issues requiring immediate administrative and faculty attention.

NITs should no longer be just places of information sharing and dissemination between students and faculty, or satisfying adolescent curiosity but should become major engines of economic development for the country. Beyond teaching the basics such as engineering drawing, each NIT can specialise in specific technical domains. For example, an NIT can focus on aeronautical engineering design and collaborate in manufacturing pilot seats complete with avionics and radar control, seat-ejection system. For this, they should seek international collaborations; here students and faculty can go on exchange basis for learning and skill-development. This will also produce the necessary and urgently required technically-capable engineers for maintenance and overhaul of fighter plane equipment.

Essentially, NITs have to develop a capacity to innovate with an industry-angled (commercial) mindset. Engineering is a discipline where tacit and explicit knowledge intersects. Both theory and experimental practice is required to become world-class practitioners. NITs, therefore, must develop an agenda where students and faculty can interact with the market for on-the-job-training opportunities and understand what the latter wants. Of course, this requires structural and cultural changes but then that is only way forward if NITs have to play a central role as engines of 'make in India' revolution.

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(The writer is a professor of strategy and corporate governance, IMD, Lucknow.)
आईआइटी में एमटेक-पीएचडी की सीटें बढ़ी

फैसला

नई दिल्ली | गदन जैका

तकनीकी शिक्षा संस्थानों में प्रोफेसरों की कमी दूर करने के लिए केंद्रीय मानव सशक्तिकरण बिकास मंत्रालय ने एमटेक-पीएचडी स्कॉलरशिप की संख्या 1400 से बढ़ाकर 10 हज़ार करने का फैसला किया है।

योजना का क्रियान्वयन एआईसीटीई और आईआइटी के जरिए किया जा रहा है। आईआइटी गुवाहाटी को फैलोशिप के लिए चयन की प्रक्रिया को आिंत्र रूप देने का जिम्मा सौंपा गया है। आईआइटी और एनआईटी में प्रोफेसरों के 40 पीसीपी पदों पर लॉटरी में उपस्थित होने के लिए केंद्रीय विश्वविद्यालयों के भी वैज्ञानिक संगठनों द्वारा प्रोफेसरों की भूमिका कमी है। इसे दूर करने के लिए केंद्र

स्कॉलरशिप भी बढ़ेगी

- अब 1400 की जगह उच्च अध्ययन में सीटें हुई दस हज़ार
- प्रोफेसरों की कमी से मिलते हैं निम्न अध्ययन की नई पहल

सरकार ने गुणवत्ता सुधार को श्रृंखला सुरू (कुछ आईसीटीई) किया है।

इसके तहत एमटेक और पीएचडी कोर्स के लिए स्कॉलरशिप प्रदान की जाती है ताकि छात्र बीतक के बाद नौकरी की बजाय अध्ययन जारी रहे। उच्च शिक्षा विभाग के अनुसार अभी तक इस कार्यक्रम के तहत महज 1400 सीटें थी। जिन्हें अब बढ़ाकर 10 हज़ार प्रतिवर्ष कर दिया गया है।

हाल में हुई एक बैठक में मानव सशक्तिकरण बिकास मंत्री स्वर्ण सूरी ने इस प्रस्ताव को मंजूरी देते हुए आईआइटी गुवाहाटी को कहा कि वे छात्रों के चयन आदि को विस्तृत प्रक्रिया तैयार करें।

इस योजना के तहत चुने गए छात्रों की दो साल का एमटेक और दो साल के पीएचडी कोर्स में एडवार्डिंग दिया जाता है। जिसमें हॉस्टल की सुविधा और जीवन रहने के साथ चार मासिक मानक ऑफिस प्राप्त करने का आदेश किया गया है।

एमटेक की 8 हज़ार रुपये प्रतिमाह और पीएचडी की 14 हज़ार रुपये प्रतिमाह प्रदान किए जाते हैं। इस राशि को छात्रों को प्रदान करने के लिए आईआइटी में इस समय मुख्यालय से एक-देखी हज़ार छात्र ही पीएचडी कर रहे हैं।

Deccan Herald ND 28-Oct-14 P-8

Govt tells IITs, IIMs to look into veg canteen demand

RSS affiliate from MP wants separate facility for vegetarians

Prakash Kumar

NEW DELHI: The government has asked the Indian Institutes of Technology (IITs) and Indian Institutes of Management (IIMs) to examine demand for a separate canteen for vegetarian students on their campuses. The Human Resource Development (HRD) Ministry recently asked the premier technical and management institutes to look into the matter after a group of people, including some associated with Rashtriya Swayamsevak Sangh (RSS), from Madhya Pradesh wrote a letter to Union Minister Smriti Irani, seeking her intervention.

In their letter, they demanded that a separate canteen for vegetarian students be set up at all the IITs and IIMs.

A STUDENT FROM IIT-KHARAGPUR: We never had any problem in our institute. Those who are vegetarian, eat vegetarian food.

Those who are non-vegetarian, eat non-vegetarian food.

"Some students at these institutions are consuming non-vegetarian food and adopting western culture. Many vegetarian students follow them and bring sorrow to their parents. Non-vegetarian food leaves an adverse impact on the person consuming it. It leads to development of Tamasic (dark and unrighteous) nature," they contended in the letter.

The ministry, which received the letter on September 9, forwarded the same to all the IITs and IIMs for "necessary" action later.

On October 15, the ministry wrote a letter to IITs, requesting the heads of the institutes to apprise it with the action taken by them on the demand made by a group of people from Madhya Pradesh.

"We have demanded a separate canteen for vegetarian students at these institutes so that good students are not spoiled by non-vegetarian food. If your eating habit is pure, you will have a pure nature. If you eat Tamasic food, your nature and behaviour will also become Tamasic," Satyendra Kumar Jain, one of the signatories in the letter to the HRD Minister, told Deccan Herald. Jain, a resident of Katni district of Madhya Pradesh, said he was a businessman and a member of the RSS.

The IITs and IIMs have a combined canteen for their students, where both non-vegetarian and vegetarian food is prepared.

"We never had any problem in our institute so far. Those who are vegetarian, eat vegetarian food. Those who are non-vegetarian, eat non-vegetarian food," an IIT-Kharagpur student said.

DH News Service
Billionaire Assembly Line

**Name of University**  
University of Pennsylvania: 25  
Harvard University: 22  
Yale University: 20  
University of Southern California: 16  
Princeton University: 14  
Cornell University: 14  
Stanford University: 14  
University of California, Berkeley: 12  
University of Mumbai: 12  
London School of Economics: 11

Mumbai University is the only non-US, UK university on the list.

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**Billionaire Undergraduate Alumni**

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TEACHERS BODY DISCUSSES HITCHES IN EDUCATION

STATESMAN NEWS SERVICE
New Delhi, 27 October

In a meeting of the Coordination Committee of Teachers Associations of Delhi (CCTAD), a collective body of the various teachers associations of the universities in Delhi and NCR discussed the hitches in the education system of India due to huge number of unfilled teaching and administrative positions.

While raising concern over the lack of international rankings for universities, the collective body of the various teachers associations of the universities in Delhi and NCR including DUTA, JNUTA and Jamia faculty revealed that most universities, IITs and IIMs do not have VCs and directors and there are a huge number of unfilled teaching and administrative positions.

"The current heads of institutions of higher learning are mostly undemocratic and whimsical in their functioning. They often get away due to lack of accountability and/or political patronage," said DUTA's president, Dr Nandita Narain. The coordination committee also pointed out that at present, some universities like Guru Gobind Singh Indraprastha University, IGNOU, Jamia do not have decision-making bodies such as Academic Council, Executive Council and in other universities where they are elected, they are in minority. The functioning of the university must be made more democratic by ensuring elected representation of majority of its members.
Lack of regulatory mechanism promotes plagiarism

**Dateline**
New Delhi

**prokash Kumar**

Increasing pressure on teachers for publication of research papers, a prominent issue of concern, has reached the university level with the University Grants Commission (UGC) to deal with it. UGC has framed a set of guidelines for the award of Ph.D. degrees, which are based on the number of papers published. The guidelines state that for the award of Ph.D. degree, a student must publish at least one paper in a refereed journal, or present at least one paper in a national or international conference. The guidelines also state that the student must have passed the written examination and have completed the prescribed course work.

However, the guidelines are not without their critics. Some argue that the guidelines are too rigid and do not take into account the quality of the research. Others argue that the guidelines are too lenient and do not ensure that students are taking the research seriously. The UGC has also faced criticism for not providing adequate support to researchers, which can lead to the publication of substandard research.

The lack of regulatory mechanisms has also led to an increase in plagiarism. Plagiarism is the act of using someone else's work as your own without giving them credit. This can take many forms, including copying text, using ideas without citation, or even using someone else's work as the basis for your research without proper attribution.

While there are laws against plagiarism, they are often not enforced. This can lead to a culture of plagiarism, where students and researchers are less likely to be caught. This can also lead to a decline in the quality of research, as researchers are less likely to take the time to properly research and write their work.

The UGC is currently working on ways to address this issue. They are considering implementing more stringent guidelines for the award of Ph.D. degrees, as well as providing more support to researchers. They are also considering the possibility of introducing stricter laws against plagiarism, which could help to reduce the incidence of this behavior.

In conclusion, the lack of regulatory mechanisms and the culture of plagiarism are significant issues that need to be addressed. The UGC and other institutions need to work together to ensure that researchers are held accountable for their work, and that the quality of research is maintained.
IISc in big biofuel boost


The push for generating advanced biofuels in India couldn’t have come at a better time

Bangalore-based Indian Institute of Science (IISc) and the National Centre for Biological Sciences (NCBS) are set to play crucial roles in a major Indo-US initiative to expand the research and knowledge base on biofuel generation. This is with an eye on boosting biofuel production within India to close the increasing demand-supply gap for fossil fuels which have proved to be environmentally degrading.

The initiative, with the blessings of Union department of biotechnology, kick-started in the USA with the launching of the Indo-US Advanced Bioenergy Consortium (IUABC), led by Indian Institute of Technology (IIT)-Powai (in Mumbai), Jawaharlal Nehru University (JNU) and University of Washington-St Louis (UWSL).

An essential solution for the planet

According to Himadri Pakrasi, director, International Centre for Advanced Renewable Energy and Sustainability (I-CARES) at UWSL, "Biofuels are an essential solution to this demand challenge, not only to bridge the supply between traditional fossil fuels and consumer demand, but to deliver better environmental performance."

In a release by UWSL, he has been quoted as saying that in the next three years, the IUABC will invest "significantly" in the knowledge base in India and US to meet the challenge of closing the gap by providing a long-lasting alternative to fossil fuel, in the form of developing advanced biofuels. Pakrasi is also the UWSL's McDonnell International Scholars Academy ambassador to JNU, and has played a pivotal role in getting this consortium up and running.

The consortium has already made an initial investment of $2.5 million, according to the UWSL release detailing the signing of the memorandum for launching the consortium that took place on October 16 at University of Washington. The signatories were Sudhir Kumar Sopory, vice-chancellor, JNU, Devang Khakhar, director, IIT-Powai, and Mark Wrighton, UWSL's chancellor. The signing took place during the McDonnell International Scholars Academy symposium on "The Role of Research Universities in Addressing Global Challenges".

Second generation

The consortium will mainly focus on developing second generation biofuels, which are also known as advanced biofuels which can be manufactured from various types of biomass. Hitherto, the focus in India had been mainly on first generation biofuel which are derived from sugar, starch, animal fats and vegetable oil.

However, now the goal of the consortium is "to increase biomass yield in plants and algae, enabling downstream commercial development for cost-effective, efficient and environmentally sustainable production of advanced biofuels," the UWSL release said.

Sources in IISc said that although the precise role the institute would be playing in this endeavour is yet not defined, its Centre for Sustainable Technologies (CST) and Combustion Gasification Propulsion Lab (CGPL) are likely to be actively involved because of the work they have been doing in the field of biofuels and biomass over the years.
The push for generating advanced biofuels in India couldn't have come at a better time. The Indian transportation fuel infrastructure is undergoing massive transformation due to increased consumer demand and a growing population, which is estimated to reach 1.6 billion by 2050. According to a report of the Global Agricultural Information Network (GAIN) of US Developmental Agency's (USDA's) foreign agricultural service, currently, in India, the combined demand for diesel and petrol is expected to grow by more than 5 percent over the coming years. Further, it has estimated that by end of this decade, the average demand for transport fuels will rise from 117 billion litres in 2013 to a projected 195 billion litres by 2023.

### IIT-M develops app for info on buses

**DC | K. Karthikeyan | October 28, 2014, 05.10 am IST**


**Chennai:** Identifying the right public transport, particularly MTC bus will soon be a thing of the past. IIT-Madras has developed a new GPS enabled technology and mobile app. All you have to do is download the app and feed the boarding and destination point in the city.

The app (named Raft) will provide real time information about the immediately available service among MTC bus, EMU and metro train and the approximate time of travel.

The technology (mobile app) developed by a team led by associate professor Lelitha Devi, transportation engineering division, department of civil engineering, IIT-M will be launched on November 15.

Three IIT alumni who launched Geotagg, a company developing solutions to urban transportation problems and currently incubated at IIT-M incubation cell, has installed GPS equipment in around 150 buses covering 25 routes in the city.

“The data sent from the buses fitted with GPS equipment will be collated at the laboratory on the campus. The real time movement of the buses and approximate arrival at a particular bus stop on the route will be available online,” said Akhilesh Koppineni, one of the founders of Geotagg.

The technology works in two days. One, you choose the bus route number and select a bus stop on the route in the drop down menu.

The app will provide the exact position of the bus and the approximate arrival at the selected bus stop. Two, a person has to feed the boarding and destination and the app will provide the list of buses, trains and metro rail services available and their timings.

“We have sourced the stops, routes, fleet size from MTC. So far, we have mapped 3,500 stops. Roughly, another 2,000 has to be covered,” Akhilesh noted adding that they have also obtained the schedule, network and routes of all EMU trains. Interestingly, such technologies were introduced a decade back abroad.

When asked, a senior MTC officer said “Let them give their finished project. At least half a dozen such Android apps designed by students are available free of cost in the market. This is not new,” he added.