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November 23

Times Of India ND 23/11/2014

US-bound tech pupils: 4 Indian cities in top 10

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Mumbai: There is a popular wisecrack among engineers in India-one legin India, another in Air India. Most of them graduate and fly off to pursue a master's. Little wonder then that for the US, as many as four Indian cities -Hyderabad, Mumbai, Chennai and Bangalore - are among the largest senders of students who want to wrap up their education with an American degree in STEMshort for science, technology, engineering and maths, according to Brookings report.

These Indian graduates are likely to get to spend more time in the United States with President Barack Obama clearing the new immigration policy.

The optional training programme, which allows F-1 (student) visa holders to work full-time in the US for up to 29 months after receiving an American bachelor's, master's or doctoral degree in STEM, will be relaxed further. Of all international students flying to the US for an education, most sign up for either a business management course or a STEM programme.

Collectively, the STEM fields account for 37% of all F-1 visa approvals. Among foreign STEM students, 31% are from China, 27% from India and 5% from South Korea.

Hyderabad sent 26,220 students to America between 2008 and 2012, and 20,840 of these attended STEM classes. Hyderabad was followed by Beijing, Seoul, Shanghai and Mumbai. Of all those who flew out from the country's commercial capital, 61.5% — 10,638 of 17,294 — joined a STEM course.

For the full report, log on to www.timesofindia.com

STEPPING ON THE PLANEFOR AMERICAN DEGREES

Rank	City	No of STEM F-1s	No of F-1s	STEM%
1	Hyderabad	20,840	26,220	79.5
2	Beijing	19,605	49,946	39.3
3	Seoul	11,628	56,503	20.6
4	Shanghai	10,768	29,145	36.9
5	Mumbai	10,638	17,294	61.5
6	Chennai	7,342	9,141	80.3
7	Riyadh	6,817	17,361	39.3
8	Bangalore	6,470	8,835	73.2
9	Jeddah	4,993	10,468	47.1
10	Taipei	4,802	15,985	30.0

Rank	City	No of STEM F-1s	No of F-1s	STEM%
1	Vijayawada	1,867	2,181	85.6
2	Vishakhapatnam	1,482	1,840	80.5
3	Chennai	7,342	9,141	80.3
4	Hyderabad	20,840	26,220	79.5
5	Secunderabad	2,333	2,969	78.6
6	Pune	4,270	5,551	76.9
7	Tehran	4,668	6,154	75.9
8	Bangalore	6,470	8,835	73.2
9	Kolkata	2,570	3,881	66.2
10	Dhaka	2,179	3,450	63.2

LOWDOWN ON CITIES

Ra

MUMBAI

Students: 17,294 | Degree Level: Bachelor's (16.7%); master's (74.2%); doctorate (9%)

BANGALORE

Students: 8,835 Degree Level: Bachelor's (8.3%); master's (80.4%); doctorate (11.3%)

CHENNAI

Students: 9,141 | Degree Level: Bachelor's (4.4%); master's (81.7%); doctorate (13.9%)

DEL HI

Students: 8,728 Degree Level: Bachelor's (27.7%); master's (58.6%); doctorate (13.7%)

HYDERABAD

Students: 26,220 | Degree Level: Bachelor's (3.8%), master's (90.8%), doctorate (5.4%)

PUNE

Students: 5,551 Degree Level: Bachelor's (7.8%); master's (79.9%); doctorate (12.4%)

देशभर की छात्राओं को इंजीनियरिंग की तैयारी कराने की लिए शुरू हुई व्यवस्था

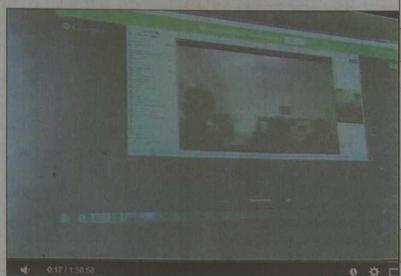
छात्राओं के लिए यूट्यूब पर ऑनलाइन लेक्चर

नई दिल्ली | कार्यालय संवाददाता

केंद्रीय माध्यमिक शिक्षा बोर्ड (सीबीएसई) ने देशभर की छात्राओं को इंजीनियरिंग की तैयारी कराने के लिए यूट्यूब पर ऑनलाइन लेक्चर की व्यवस्था शुरू की है। छात्राएं www.youtube.com/watch?v=0eW cy8UMIKU पर जाकर इसे देख सकती हैं।इसकी अवधि एक घंटे से अधिक है।

यह उड़ान परियोजना का हिस्सा है। परियोजना के तहत देशभर के तमाम बोर्ड की 11वीं और 12वीं की छात्राओं को इंजीनियरिंग कॉलेजों में दाखिला दिलाने के लिए तैयारी कराई जाएगी। खास बात यह है कि तैयारी ऑनलाइन कराई जाएगी।इस कड़ी में बोर्ड ने यूट्यूब से शुरुआत की है।

ऑनलाइन रिसोर्स, ट्यूटोरियल, लेक्चर, अध्ययन सामग्री निशुल्क मुहैया कराया जाएगी ताकि वे देश के प्रतिष्ठित इंजीनियरिंग कॉलेजों की प्रवेश परीक्षाओं के लिए तैयारी कर सकें। इसके लिए कुछ शर्तें तय की गई हैं।



यूट्यूब से लिया गया ऑनलाइन लेक्चर का स्क्रीन शॉट।

क्या है सीबीएसई की शर्तें

इस परियोजना में शामिल होने वाली छात्राएं भौतिकी, रसायन व गणित विषयों की हों और कक्षा 10वीं में उन्होंने न्यूनतम 70% अंक प्राप्त किए हों। विज्ञान व गणित में 80% अंक हासिल किए हों। सीबीएसई ने साफ किया है कि जिन बोर्ड में क्युमुलेटिव ग्रेड पॉइंट ऐवरेज (सीजीपीए) पहित का पालन किया जाता है वहां न्यूनतम सीजीपीए 8 तथा विज्ञान एवं गणित में न्यूनतम जीपीए 9 होना अनिवार्य है। 50% सीटें एससी, एसटी व ओबीसी छात्राओं के लिए निर्धारित हुई हैं।

फीस में दी जाएगी मदद

एक व्यापक मूल्यांकन प्रणाली बनाई गई है जिसके द्वारा रिवॉर्ड प्वाइंट जुड़ेंगे और आईआईटी एवं एनआईटी की फीस अदा करते वक्त उन रिवॉर्ड पॉइंट को रिडीम करके वितीय मदद दी जाएगी। छात्राओं और उनके माता-िपता को जोड़ने के लिए बोर्ड उन्हें परामर्श देता रहेगा। सीबीएसई छात्र हेल्पलाइन भी शुरू करेगा जो छात्राओं को उच्च शिक्षा की तैयारी कराएगा।

टैबलेट भी दिए जाएंगे

उड़ान के तहत बोर्ड आवेदन के तहत चुनी गईं छात्राओं को टैबलेट देगा। टैबलेट में जेईई-मेन व एडवांस की परीक्षा से जुड़ा पाठ्यक्रम होगा। इसके अलावा राज्य स्तर की परीक्षा का पाठ्यक्रम भी होगा। इन टैबलेट से घर बैठे तैयारी होगी। टैबलेट निशुल्क दिया जाएगा या नहीं, फिलहाल इस संबंध में बोर्ड ने साफ नहीं किया है।

मंगल मिशन पर भी होंगे सवाल

सीबीएसई ने 2015 में 9वीं और 11वीं कक्षा के लिए होने वाली ओपन बुक परीक्षा का पाठ्यक्रम जारी कर दिया है। छात्र http://cbseacademic.in/ पर जाकर विषय देख सकते हैं। नौवीं की परीक्षा में भारत के मंगल मिशन पर सवाल पूछे जाएंगे। इसके अलावा स्वास्थ्य पर भी सवाल आएंगे। वहीं 12वीं में इकोनॉमिक्स, भूगोल और बायोलॉजी के सवालों को सार्वजनिक किया गया है।

Time to bid adieu to foreign languages?

Navbharat Times ND 23/11/2014 P-24



Times of India ND 24/11/2014 P-5

Job offers 'unusually high', IIT expects happy season

Shreya.Roychowdhury
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New Delhi: The number of pre-placement offers—especially big ticket ones, flowing into Indian Institute of Technology, Delhi, is "unusually high" this year. Six had interned at Samsung Korea and all six have been offered jobs at an annual cost-to-company of Rs 92 lakh per head. Four others interned at Deutsche Bank; three got jobs out of it.

With the high rate of "conversion" in 'day-one companies' and the sizes of offers, students expect a good season of placements this December.

"The number of offers per company is likely to be higher as the conversion from internship to jobs has been really high this year," says Shivansh Aggarwal, head of IIT-Delhi's Student Affairs Council. The total pre-placement offers made before the beginning of formal placement season may be much higher though not necessarily as lucrative.

Typically, the highest-pay-

ing jobs are the coding ones and at banks and consultancies; these are called in on the first day of placements. "The core companies are the technical ones and usually they can't match the packages offered by the finance and consultancy sector. Many students get



PRE-PLACEMENT BONANZA

swayed away from the technical field. We can't stop students from accepting and there may be family pressure. But we do call core companies on dayone," says dean, students' affairs, SK Gupta.

As opposed to the practice just about everywhere else, IIT-Delhi is reluctant to reveal placement information. Explaining this unusual reticence, Gupta says, "CTC figures can be misleading and it also puts other kids in a lot of pressure."

Despite the size of the paycheques, many students choose to opt out. Several IITs have introduced the provision of "deferred placement" but in Delhi, it will serve as a safetynet for those taking the risk of joining a start-up. Only those who opt-out of regular placement to try their hand at entrepreneurship or join start-ups will be allowed to defer.

The batch that'll be placed in December 2015 will have to put in their requests for deferment along with the plan for their start-up in January. "A panel will look in to the plan and accordingly permit or deny," explains Aggarwal. "We did this because those coming back after two years will impact the placement of all the students signing up that year." adds Aggarwal. At the same time, it may make parents nervous about their kids forgoing stable jobs for start-ups less resistant to the idea.

Rajasthan Patrika ND 24/11/2014 P-10

आईआईटी-एम सीएमएस का पूर्ण सदस्य

देश का पहला आईआईटी संस्थान बना

चेन्नई. भारतीय प्रौद्योगिकी संस्थान मद्रास (आईआईटी मद्रास) कॉम्पेक्ट माउन सोलेनॉयड (सीएमएस) का पूर्ण सदस्य बन गया है। सीएमएस का पूर्ण सदस्य बनने वाला आईआईटी मद्रास देश का पहला ऐसा आईआईटी संस्थान है। सीएमएस काउंसल यूरोपियन प्योरल रिसर्च न्यूक्लीयर (सीईआरएन) के साथ काम कर रहा है। गौरतलब है कि यह दुनियाभर के भौतिकविदों व इंजीनियरों का एक ऐसा संगठन है जो ब्राह्मांड की बुनियादी संरचना की खोज में जुटा हुआ है।

बड़ा अंतर्राष्ट्रीय मंच

सीईआरएन वही संगठन है जिसने

2012 में हिंग्स बोसोन की खोज की थी। यही नहीं सीईआरएन ने ही वर्ल्डवाइड वेब (डब्ल्यूडब्ल्यूडब्ल्यू) का भी अविष्कार किया था। यही नहीं सीईआरएन न केवल भौतिकी की उच्च ऊर्जा पर अनुसंधान करने वाली अंतर्राष्ट्रीय प्रयोगशाला है बल्कि वह

दुनिया में नए अनुसंधान के लिए

वैज्ञानिकों को एक बड़ा अंतर्राष्ट्रीय

मंच भी उपलब्ध कराता है। महत्वपूर्ण सदस्य

आईआईटी मद्रास के निदेशक भास्कर राममूर्ति ने कहा कि सीएमएस का पूर्णकालिक सदस्य बनाने में आईआईटी मद्रास के भौतिकी विभाग के प्रोफेसर प्रफुल्ल कुमार बेहरा ने महत्वपूर्ण भूमिका निभाई है। सीएमएस में उन्होंने अपना महत्वपूर्ण शोध पत्र प्रस्तुत किया था।

इसी बिना पर आईआईटी मद्रास

को पूर्ण सदस्य बनाया गया।

अनुसंधान करने की क्षमता विद्यमान

राममूर्ति ने बताया कि अपने शोध पत्र की प्रस्तुति में प्रोफेसर बेहरा ने इस बात पर जोर दिया कि आईआईटी मद्रास में वर्तमान में भौतिकी के उच्च दबाव पर अनुसंधान करने की क्षमता विद्यमान है।

अब सीएमएस का पूर्ण सदस्य बनने के बाद अनुसंधान में दो आईआईटी मद्रास के छात्र शामिल होंगे। ये दोनों छात्र भौतिकी विभाग से ही होंगे।

एक बडी उपलब्धि

आईआईटी के सदस्य बनने पर भास्कर ने कहा कि भौतिकी के क्षेत्र में आईआईटी मद्रास की यह एक बड़ी उपलब्धि है। केवल भौतिकी के क्षेत्र में ही नहीं बल्कि उससे जुड़े अन्य अनुसंधान क्षेत्र में भी छात्रों को मौका मिलेगा। उन्होंने कहा कि हम इसा संस्थान से जुड़ने की प्रतीक्षा में थे और पूरी उम्मीद भी थी कि हम अवश्य अपने काम में सफल होंगे और अब जबकि हम इसके सदस्य बन चुके हैं तो यह हमारे लिए एक बड़ी उपलब्धि है।

इससे दुनिया में किए जा रहे अब तक के सबसे बड़े प्रयोग का हिस्सा होंगे। ब्रह्मांड की बुनियादी संरचना की खोज में हो रहे अनुसंधान में अब हमारी प्रत्यक्ष भागीदारी होगी।

आईआईटी-एम लाभ उठाए

इस संबंध में आईआईटी के पूर्व छत्र रहे प्रोफेसर नागराजन ने कहा कि आईआईटी मद्रास इस अवसर का पूरा लाभ उठाकर दुनिया के अन्य देशों के विश्वविद्यालयों के साथ अनुसंधान के क्षेत्र में काम कर सकता है।

Deccan Herald ND 24/11/2014 P-8

IIT-M full member of CERN body

Indian Institute of Technology-Madras (IIT-M) has become the first IIT in India to have full membership of the CMS (Compact Muon Solenoid) collaboration of CERN (Conseil Européen pour la Recherche Nucléaire), the European organisation for nuclear research, where physicists and

engineers are looking into the fundamental structure of the universe, *DHNS* reports from Chennai. CERN is well known for the discovery of the Higgs boson in 2012. The world wide web (www) was also invented at CERN. It provides a platform for innovation in technology through international collaboration.

IIT-M Joins CERN to Explore the Secrets of the Universe

http://www.newindianexpress.com/cities/chennai/2014/11/22/IIT-M-Joins-CERN-to-Explore-The-Secrets-of-The-Universe/article2535905.ece2

CHENNAI: Led by an expert who was part of the ATLAS experiment that helped find the Higgs Boson by the Large Hadron Collider at CERN, the Indian Institute of Technology - Madras has become a full member of a collaboration with the Geneva-based organisation in search of the structure of the universe.

While reputed institutions including TIFR, BARC and a few others have been partnering with CERN, IIT-M is the first IIT to come on board of the prestigious LHC experiment.

According to Prafulla Kumar Behera, an associate professor with the department of physics, this initiative will help the institute strengthen its capabilities in fundamental research. "CERN is home to a lot of innovations, including the world wide web. This collaboration is like a bridge that would connect us to the highest level of scientific research while offering them our talent and expertise," Behera told The New Indian Express.

Besides him, another faculty, James Libby, and two PhD scholars have come on board on the CMS collaboration.

Behera was part of the ATLAS (A Toroidal LHC Apparatus), one of the many particle detector experiments at the LHC particle accelerator, for half a decade till 2011 before returning to India to take up the job at IIT-M.

The collaboration will be on CMS or Compact Muon Solenoid, a particle detector that is designed to see a wide range of particles and phenomena produced during high-energy collisions in the LHC. This information is believed to hold answers to the questions like what the universe is really made of, what forces act within in and what gives everything substance.

Behera has previously worked on silicon pixel detector, a sophisticated technology used primarily in fundamental scientific research, which is not available in India. "We would like to collaborate and develop Indian expertise so that by the time the plant is upgraded by 2020 as has been planned, there will be substantial contribution from our country," said Behera, who returned from CERN a week ago.

The silicon pixel detector has uses outside the limits of fundamental scientific research, including medical purposes like advanced imaging, he said, pointing out that Indian industries could manufacture the detector in the coming years.

While the team from Chennai will be placed at CERN during the summer, the idea is to collaborate from here by using grid computing to access data generated at the labs in Geneva. Grid computing facility has already been networked till TIFR, Mumbai, which will be expanded to south India, he added.

Another professor resigns from NIT

Shivani Saxena, TNN | Nov 23, 2014, 11.04 PM IST

DEHRADUN: Tired with dealing with work pressure, and alleged corruption prevalent at the institute, another assistant professor working at National Institute of Technology (NIT), Uttarakhand has resigned this week.

The assistant registrar, Bhole Shankar Sikhwal at the institute was sacked on October 31 after he raised his voice over alleged fraudulent practices by institute's director HT Thorat.

TOI spoke to various faculty members on condition of anonymity after the incident and most confirmed that nobody is happy working under the present director and wished for his resignation. As per sources in the institute, in another month three to four more professors are likely to resign from their posts.

'IIT administration is trying to control student activity'

 $\frac{http://www.thehindu.com/news/cities/chennai/chen-society/iit-administration-is-trying-to-control-student-activity/article6625444.ece$

The members of a student collective that organised the 'Celebrating Love' event at IIT-Madras on November 14 have accused the institute's administration of attempting to control student activities.

ChintaBAR, the collective, put out a note on its Facebook page on Saturday about the response of the IIT-M administration to the event, which drew mixed reactions. Several right-wing groups had condemned the event.

According to the note, several students were summoned by the Dean of Students, Srinivasan Sivakumar, on November 20 regarding the event.

They were told that ChintaBAR should shed its independent status and register as an official student body with a faculty adviser. Any activity planned had to be cleared by the Dean himself, they were told. "Moreover, requests [for information] about existing rules or published circulars regarding such matters were denied," the note claimed.

The note also asserted the need for a liberal framework for open functioning.

When contacted, Professor Sivakumar said there were standard operating procedures in place at IIT-M.

"The dean of students needs to be informed of events conducted by a student body on campus so that they do not hamper the functioning of the university," he said. He added that no activity had been denied permission so far and that the authorities had not been contacted before the 'Celebrating Love' event.

"Any student group needs to be registered with either the dean, a faculty member or the student secretary. These steps are not meant to curb the activities of the students, but to ensure that nothing unlawful takes place," Professor Sivakumar said

Open online courses: A welcome step in Indian education system

IANS | New Delhi November 23, 2014 Last Updated at 13:14 IST

http://www.business-standard.com/article/news-ians/open-online-courses-a-welcome-step-in-indian-education-system-114112300255 1.html

India has officially jumped on to the open online courses bandwagon with the government announcing Swayam, an initiative that aims at providing affordable and quality education to citizens for free.

The move is a welcome step in India, which battles a shortage of infrastructure and qualified teachers in higher education, with the model also having the potential to democratise higher education, experts say.

MOOCs or massive open online courses is a system aimed at unlimited participation and open access via the web. It does not always quantify as formal education but provides a platform to study quality courses from institutions offering them, usually for free.

The government had announced the programme as part of the initiatives undertaken by the ministry of human resource development (HRD) in its first 100 days in office with the aim to reach out to 10 million students.

HRD Minister Smriti Irani said that the initiative was undertaken in the light of concerns expressed over the quality and affordability of education. She also said that an Indianised version has been provided to students.

Welcoming the initiative, experts said that the availability of the model was a "great asset" for motivated students.

"MOOCs have the potential to become a teaching/learning platform, with universities certifying the competence (degrees) and providing the opportunity for networking and developing other skills. In this scenario MOOCs are like textbooks," T.V. Prabhakar, professor, department of computer science and engineering at IIT-Kanpur, told IANS.

Describing MOOCs to have the "potential to democratize higher education", Pushkar (one name), a professor in the department of humanities and social sciences at BITS Pilani, said that it offers India's young population a platform to get themselves an education "despite the nation's failed higher education system".

He, however, added that young Indians and their parents are more interested in degrees than in education per se.

"So as long as one can get a degree after doing some MOOCs, it is all good," Pushkar told IANS.

At a recently held higher education event, Irani had said: "Recognising the need for affordable and quality education, the government has set up a platform of the Indianised version of MOOCs..."

She said in this, all the Indian Institutes of Technology (IITs), central universities, Indian Institutes of Management (IIMs) and selected best colleges and institutions of India will provide graduate, undergraduate and post-graduate courses free of cost to all Indians.

She added that those seeking a degree or certification can sit for an exam at a nominal cost in that particular institution.

In the first phase of Swayam (Study Webs of Active-learning for Young Aspiring Minds) IIT-Bombay, IIT-Chennai, IIT-Kanpur, IIT-Guwahati, University of Delhi, Jawaharlal Nehru University and IIM Bangalore, among others, alone as well as with the help of faculty from foreign universities, will offer courses in areas of management, social sciences, basic sciences, engineering education and energy.

Explaining the benefits, Richard C. Levin, CEO, Coursera, a global online education company, said its advantage is "multi-faceted".

"For one, MOOCs are recognised teaching programmes in renowned educational institutions, including Harvard and MIT; world-class institutions ensure globally accepted learning and recognition; and there's flexibility in learning time frame.

"Globally, MOOCs are seen as the future of higher education. India can further benefit from online education as Indian learners are hungry for skills to help them get a jobs or get into colleges/universities," Leven told IANS.

He said that the IT surge in India has fuelled significant demand for online courses among the country's knowledge-seeking population, adding that India is Coursera's largest market outside the US.

But, can MOOCs be taken as a substitute for university education?

"I think yes eventually, as technology becomes more readily available. Right now, the way most of the MOOCs are organized is that there are platforms where one can create content and create lectures (and you) can pick what you want. But it's only a matter of time before a lot of these lectures are going to get organized into what a university has to offer.

"And in that sense, some universities have already started offering online courses," Vineet Gupta, pro-vice chancellor of Ashoka University, Sonepat, told IANS, adding that it was for the universities to see if they wanted to use MOOCs as a way to substitute university education or actual education in the classroom.

According to Prabhakar, while MOOCs will make good courses, taught by good teachers, available to the students, "we will have to make sure that these courses reach the remote parts of India. Otherwise, we will create another form of digital divide".

Sundar Balasubramaniam, dean, academic and resource planning, BITS, Pilani, while agreeing that MOOCs can provide a manifold increase in the reach of quality content and pedagogy, told IANS: "University programmes and courses provide students with an opportunity to intellectually engage with peers and mentors over an extended period in a focussed environment. That is hard to replace."

(Shweta Sharma can be contacted on shweta.s@ians.in)

Panel expresses concern over quality of higher education

http://post.jagran.com/panel-expresses-concern-over-quality-of-higher-education-1416630180

New Delhi: Several members of a parliamentary panel on HRD Ministry expressed their concern over the quality of higher education in the country and employability though they expressed appreciation on steps taken by the Ministry on skill development.

At the meeting of the Consultative Committee of Parliament, attended by HRD Minister Smriti Irani, the members emphasised on the need to remove the tag of vocational education being inferior in nature, said a ministry statement.

While discussing skill development in higher education, the Committee deliberated on steps such as promoting lateral and vertical mobility as an effort to integrate skill and vocational development with mainstream general education and credit framework for seamless integration of academic knowledge and practical vocational skills.

The committee met for the first time after the formation of the new government at the Centre.

A presentation was made at the meeting on devising a framework for effective integration of skills and knowledge.

The focus of the presentation was on mainstreaming skills in higher education and improving social values for both skills and vocational sectors, the statement said.

Indian scientists use nanoparticle-treated seeds to raise yields

http://www.business-standard.com/article/news-ians/indian-scientists-use-nanoparticle-treated-seeds-to-raise-yields-114112300381 1.html

In a dramatic breakthrough, Indian scientists have found that synthetically engineered nanoparticles comprising iron and sulfur and modelled on the natural ones that sustain life at the bottom of oceans can boost crop yields and be the future of sustainable and eco-friendly agriculture. Nanoparticles are thousands of times smaller than the width of a human hair.

The projected global population will be approximately nine billion by 2050. To provide healthy nutrition to this population, agricultural production will have to increase by about 60 percent.

For answers, Indian experts have turned to the ocean and molecules that date to the origin of life on earth.

Deep down on the ocean floor, where oxygen is deficient, iron pyrite (iron and sulfur) nanoparticles spewed by hydrothermal vents - fissures - have been the source of energy for bacteria and tiny plants since time immemorial.

With these nano-factories as their inspiration, scientists have come up with an innovative way to use pyrite nanoparticles in agriculture as an agent for seed treatment to sort of "dress up" seeds prior to sowing.

This has resulted in "enhanced plant growth with minimum interference to the soil ecosystem."

They applied the technology to the globally popular leafy vegetable, spinach, scientifically termed Spinacia oleracea.

"To the best of our knowledge, this is the first evidence in the world where a special class of nanoparticle has been used as a seed treatment or seed priming agent in a controlled environment which resulted in higher production of the spinach crop in the field," Mainak Das, Assistant Professor of Biological Sciences and Bioengineering at Indian Institute of Technology-Kanpur (IIT-K), told IANS in an email/telephone interview.

Spinach is a rich source of iron, calcium and many vitamins and is consumed fresh in salads or cooked in a variety of ways. It is also the favourite pick-me-up for the famous cartoon character Popeye, the Sailor Man.

Gaurav Srivastava, also of IIT-Kanpur, said the plants developed from the primed seeds exhibited "significantly broader leaf dimensions, larger leaf numbers, increased biomass along with higher concentration of calcium, manganese and zinc in the leaves".

Interestingly, this was in comparison to the plants developed from seeds sans the nanoparticles, according to the research published Oct 29 in Royal Society of Chemistry (RSC) Advances, an international journal covering chemical sciences.

But is the strategy safe enough and can it reduce the use of chemical fertilizer without compromising production?

Das, who led the study, pointed out: "We are not putting the nanoparticles in the soil. So we are not disturbing the soil ecosystem at all (unlike what a fertilizer does, thus we call these as pro-fertilizer). It is a brief exposure."

The particles are mixed with water and the seeds then immersed for 14 hours, Das explained.

Also, since iron pyrite is ubiquitous in nature and found all over the earth's crust, chances that its such minuscule exposure to seeds will cause any adverse effect is almost negligible, Srivastava pointed out.

Additionally, as the treatment is administered in nano-dimensions, the dose requirements are reduced - an advantage over chemical fertilisers.

Researchers from Ludhiana's Lovely Professional University, the Defence Research and

Development Organisation (DRDO-New Delhi), Yonsei University (Seoul) and Delhi University also contributed to the study that also pinpointed how it happens.

Apart from opening avenues of sustainable agriculture, the study has drawn an evolutionary convergence between two diverse life forms (such as bacteria and spinach) in terms of their ability to use a common energy molecule, linked to the origins of life, for biomass production.

"Currently, the DRDO and industrial engineering group of the researchers are working towards converting this amazing finding into production-ready technology. Along with this, they are also exploring the applications of the same to increase agricultural footprint in harsh environment of the northern barrier of India," Das said.

Does India need Foreign Universities?

On November 13, IT veteran NR Narayana Murthy said, "My own personal view is there should be higher and higher levels of autonomy. Government should not interfere in setting up colleges, in running colleges. The market, the society will decide which is a good university, which is not a good university, rather than the Government mandating."

One proof of what he is talking about is the Birla Institute of Technology which is as good as any IIT. It is also true that India is becoming more affluent so it is a good idea to channel some of that money into private universities and as an incentive to make that happen, the Government has to grant higher and higher levels of autonomy to these private universities. Then more great universities like BITS will spring up all over India. But will that really happen, or is it just wishful thinking?

The truth is that a lot of people in India want to invest in higher education as a profit-making business. But higher education is more important than making a profit. The reason that BITS is a good university is because the Birlas are manufacturing people and they understand the importance of engineering. To begin with, let us differentiate between setting the curriculum and running the college, because these are two different things. For example in Andhra Pradesh there are 4 major universities, namely Osmania, JNTU, SVU and Andhra University which are Government-run. Then there are many private colleges affiliated to these universities and

these are privately owned, but they are required to follow the curriculum and exams of the Government-run universities. As of right now in Andhra, more students graduate from private colleges than from the Government colleges, but the degree they are receiving is issued by the Government-run University.

What Narayana Murthy is recommending is different. Narayana Murthy is suggesting that higher education be de-regulated so that private colleges can set their own curriculum and exams and become a full-fledged university in their own right. My belief is that this would lead to chaos in some institutions on the one hand and elitism in other institutions on the other hand. Students will suffer. Let me use Delhi University as an example.

What the Delhi University Chancellor tried to do was actually much simpler than setting up a whole university. The DU Chancellor tried to take a 3-year degree program and make it into a 4-year degree and made a complete mess of it. As DUTA correctly pointed out, what he actually did was to leave the 3-year courses as they were and inserted 1 year of preparatory courses in front, except that the preparatory courses had absolutely no value because they repeated topics already covered in high school, added topics which had no value and borrowed from topics which would be covered in more detail later on anyway. So, as DUTA pointed out, the entire first year that the 4 year students did was a complete waste of time, and the 4 year students were actually getting a 3 year degree except it was just called a 4 year degree.

Now imagine the chaos that happens all over India when the Government de-regulates higher education and allows universities to be formed out of thin air. The people who are making the curriculum have to put together a course plan that looks like an actual degree plan so they take the simplest way and look at what other universities are doing. But they want their university to look different and "modern" so what they do is copy different courses from different universities and then like icing on the cake, they add "special" courses on hot topics and "electives" in the 3rd year and 4th year which basically have interesting names but little else. Now you cram all these jigsaw pieces together and throw out all the bits that don't fit. Lo and behold you have a new curriculum. The only problem is that now some courses have too much material to cover properly and are too difficult and some courses have almost nothing in them and are just a waste of time. Some courses overlap with other courses, and some courses are in the wrong order, so there is no continuity of concepts. You can say what you like about the Government universities, but at least the curriculums there have evolved over the last 40 years and as of now the Government universities have good curriculums.

During the Congress Government's tenure, the idea proposed by Narayana Murthy was actually tried. It was an utter disaster. The Congress Government allowed the formation of hundreds of "Deemed Universities" and the students in many of these universities received such a low standard of education that in 2010 the then Human Resource Development (HRD) Minister Kapil Sibal sought derecognition of 44 Deemed Universities. So it is a mistake to simply de-regulate higher education because the students enrolled in bad universities will suffer and their careers will be hurt. If new restaurants fail that is not a problem for society, but if universities are recognised and then decognised it causes a lot of damage to the Indian education system.

Now let's talk about elitism. Narayana Murthy says the market will decide, so let us look at the Indian market. Whether you are buying a car, a refrigerator, a television or a cellphone you will notice that the bestselling brands are all foreign. Now apply the same logic and look at education in India. If you de-regulate higher education, it opens the floodgates to foreign universities from USA and Britain setting up shop in India. Foreign universities are wonderful, I studied in one myself, but I think it is a mistake to let foreign universities set-up campuses in India for many reasons.

Most people are aware that every university has a culture of its own far beyond the curriculum that it teaches. There are schools in the USA which are classified as "party" schools and these typically have tuition rates which are astronomically high. Students don't actually go to these schools just for an education but rather for the pedigree. They make the right connections which help them in their later career and as Alumni they donate

lavishly to stay in the old boy network. Right now India does not have such a culture, but when you invite foreign universities into India, this is what you can expect – the mentality that knowledge can be purchased.

The point is that it is good to learn technology from foreign countries, but it is important to improve technical education for all the people in India and not just the few who can afford to buy it. Consider this: if foreign universities set-up campuses in India they will use foreign textbooks. The average engineering textbook in the USA costs about \$50 i.e. about Rs 3000. If an engineering student in India buys 5 textbooks per semester and attends 3 semesters a year for a four year engineering degree, then they have spent Rs 1.8 lakh on textbooks alone, and all that money goes straight out of India to the foreign book publishers. Now ask yourselves how many Indian students can afford Rs 1.8 lakh just for textbooks?

The goal of the Modi Government "Make in India" is best served when a large number of Indians have a proper technical education and not just a few elite students having a superlative education. As I said in my previous article on NitiCentral, I want the Government to become more involved in higher education, I want the Government to mandate base curriculum for engineering colleges and not leave each university to decide for itself. I want the UGC to provide freely downloadable course material in PDF format for each engineering course mandated by the UGC. I want the UGC to provide freely downloadable lecture slides in PDF format for each engineering course for the teachers to use. I want the Government to drive down the cost of engineering education to be the same as an arts degree, so that every Indian who wants an engineering degree can afford one. Only then will "Make in India" become a reality. The Modi Government should direct the UGC to provide downloadable national standard curriculum for Electrical & Electronics, Mechanical and Civil Engineering by September 2015, downloadable course material by September 2016 and downloadable lecture slides and video by September 2017. If no action is taken right now, then "Make in India" will never become reality.

IIT-Madras shows the way in low-cost housing

Binoy Valsan, TNN | Nov 24, 2014, 02.36 AM IST

CHENNAI: With real estate prices and cost of construction on the rise, owning a house in cities remains a dream for the middle class. But it might soon be a thing of the past, courtesy IIT Madras and its efforts to popularize the cost-effective, rapid and eco-friendly method of construction using Glass Fiber Reinforced Gypsum (GFRG) panels.

After the successful construction of a two-storey building at the IIT campus in June this year using GFRG panels, experts from the civil engineering department of the institute are close to an agreement with Tata Housing Development Corporation Ltd to build a housing project at Boisar, a suburb in Mumbai, for low-income groups.

The GFRG building method essentially uses glass fibres and specially calcined gypsum plaster to make the regular panel stronger and water resistant.

According to Shinto Paul, structural design engineer for the GFRG building at IIT-M and PhD scholar at the civil engineering department, the foundation for the building is laid in the regular manner and GFRG panels are used for erecting the remaining superstructure with minimum concrete usage except at the joints and cavities of the panel. Once the foundation is constructed and the panels are erected, the main structure can be built in a few days.

However, while using GFRG panels, all floors should ideally have the same floor plan. Curved structures and domes are best avoided or concrete can be used for such areas.

"The rapid low-cost housing project is headed in the right direction and we are in talks with Tata Housing to use the technology for mass housing projects. We are also collaborating with various state governments and housing structures

are already being built in Kerala using this technique." said Bhaskar Ramamurthi, director, IIT Madras.

A senior official with Tata Housing confirmed the development and said the pilot project discussions were under way. The pilot module of the Boisar project consists of nine buildings, each with five floors and eight apartments on each floor. After the construction of the pilot module, the project may be scaled up with more buildings. It is estimated that the total cost of construction will be limited to less than 1,200 per sqft.

"We have been getting numerous enquiries about the project after the completion of the demo building at our campus," said A Meher Prasad, head of the department of civil engineering, IIT Madras. The 1,981sqft two-storeyed building at the IIT campus, with two one-bedroom and two two-bedroom apartments, was completed in just a month at a cost of 24 lakh.

"We are constructing a 54-unit housing building for Kerala government at Chottanikara at a cost of 1,000 per sqft. The idea is to bring down the cost of constructing the structure and the customer can choose the remaining accessories and fittings," said Shinto Paul.

As of now, the GFRG panels are being manufactured at FACT-RCF Building Products Ltd (FRBL) in Kochi, a joint venture between The Fertilisers and Chemicals Travancore Ltd (FACT) and Rashtriya Chemicals and Fertilisers, Mumbai. Proposals have been mooted to the Union government and more manufacturing units for GFRG panels are expected to be set up across the country to further scale down the transportation cost of the panels.

Ex-IITians concerned over declining world ranking of IIT-K

http://timesofindia.indiatimes.com/city/kanpur/Ex-IITians-concerned-over-declining-world-ranking-of-IIT-K/articleshow/45251593.cms

The students of 1964 batch of IIT-K have expressed concern over the decline in the world ranking of the institute in comparison to the other institutions. These ex-students advised the institute to strengthen the industry-academia partnership for reaping benefits of research done here. One suggestion was that the institute should rope in visiting faculty members from foreign universities as it would be beneficial for students and the institute.

Kaplesh Kumar and Sharad Tripathi of 1964 batch said that it is a matter of concern that other IITs and institutions are growing, IIT-Kanpur is lagging behind. They said that IIT-Kanpur is not being able to keep pace with top universities in the world despite the fact that its has grown more than 50 years old and produced great names.

"For all ex-students, seeing their alma mater growing and staying on top is always a wish. We also wish to see IIT-Kanpur on top," said a former.

Yajna Jan Tamrakar, an ex-student of institute of Nepalese origin said that some Chinese universities have made place in the prestigious QS world ranking, whereas IITs have not. He said that even his son went to one of the Chinese universities to study.

He added that IITs have their own brand image in the world. IIT-Kanpur in particular had come a long way in past 50 years. "In our times, relationship between students and teacher used to be informal. They considered us their own children and motivated us to study hard," Tamrakar recalled.

Sumant Sareen, who passed out in civil engineering, said that successful students of the institute have given IITs a brand name and they made it famous in the world. "The institute gave students an identity of their own and courage to do things which are considered impossible. We owe a lot to this institute," Sareen

Financial Express ND 24/11/2014 P-12

Regulating higher eduction for promoting excellence

One of the major challenges in regulating higher education in India is the fact that there are few clearly defined goals and purposes of regulation



he Times Higher Edu-

he Times Higher Education World University Rankings 2014-15 have once again demonstrated the distance that Indian universities needs to travel for achieving excellence in higher education. It is fair to say that we shouldn't be surprised that not a single Indian university is among the top 200 in the major rankings of global universities in the world. While a significant number of universities in the US, Canada, the UK, Europe, Australia and New Zealandare prominently present in the Times 2014 rankings of universities; recent trends have demonstrated that many countries in Asia and the Middle East have acquired an inspiring presence among the top 200 universities in the world. These include: Japan (5); Hong Kong (4); Korea (4); Turkey (4); China (3); Singapore (2); Israel (1); and Taiwan (1).

There is a need for transformation of the regulatory environment for seeking fundamental reforms in the higher education sector. There is little doubt that the higher education sector is crying for reform and mindless proliferation of rules and regulations with numerous approval mechanisms and inspection regimes will not help in raising the quality of higher education, nor will it foster the promotion of excellence.

The following issues need to be carefully considered while examining the nature of regulatory reform that is needed in the higher education space:

Defining goals and purposes of regulation

One of the major challenges in regulating higher education in India is the fact that there are few clearly defined goals and purposes of regulation. This has created a regulatory environment of institutionalised adhocism in which numerous regulators of higher education, both at the central and state levels, are occupying spaces with a view to regulating higher education, imposing standards, and monitoring the functioning and effectiveness of



The higher education sector is crying for reform, and mindless proliferation of rules and regulations with numerous approval mechanisms and inspection regimes will not help in raising the quality of higher education

higher education institutions. Some of these institutions, unfortunately, don't have the competence to fulfil these responsibilities. The powers and functions of many of these bodies are vast and not defined properly. Because of the fact that the regulatory bodies are, at times, grant making and funding institutions, there is a problem of misplaced priorities in regulation. Any progressive approach to regulation needs to develop clearly defined goals and purposes of regulation. The regulatory environment should foster a culture of excellence among higher education institutions.

Aligning regulatory framework to excellence

Indianhighereducation system suffers from several forms of mediocrity. The prevailing set of rules and regulations do not enable innovation in higher education. The regulatory framework needs to be aligned to the aspirations of higher educations institutions to seek excellence. This inevitably means that there is a need for re-examining the existing regulatory framework on the basis of the institutional objectives and goals measured in defined and measurable terms. For example, if one of the goals of higher education in India is to promote substantive research, scholarship and knowledge creation through pub

lications, then the regulatory environment needs to enable the faculty members in the universifies to have reasonable hours of teaching in a semester. This will allow them to pursue research through thinking, reflection, analysis and also give them adequate time and space to publish their research. Unfortunately, since our regulations tend to follow a one-size-fits-all policy, there is little scope for institutions to be differentiated by the regulators in relations. This has resulted in a situation where the higher education institutions are not able to seek excellence in any aspect of their governance.

Addressing conflicting regulatory mechanisms

The higher education regulatory environment in India is not only complex but also multi-layered with different forms of ambiguity, uncertainty and contradiction in the rules and regulations. While the state and central governments are involved in different aspects of regulating higher education, there are also an umber of statutory bodies and institutional mechanisms which are regulating certain aspects of higher education. In addition, there have been a plethor a of judgments of the Supreme Court of India and the various High Courts which have interpreted various aspects of laws, rules and

regulations of higher education. There are very few areas, if at all in higher education in India, which are not regulated. This has created a conundrum in which the higher education institutions have little opportunity to be imaginative and innovative in their approaches to institution building. One of the most effective ways of addressing conflicting regulatory mechanism is for promoting, over a sustained period of time, institutional leaderiship. While the University Grants Commission could play the role of an institution that provides leadership in higher education policy, there is a greater need for ensuring legitimacy and credibility of our regulators for them to make an effective contribution to this aspect.

Ensuring transparency in the exercise of regulatory powers

Regulatory powers in relation to higher education, like other areas of governance, have been abused. Higher education regulations and institutional mechanisms for ensuring high standards in higher education have, unfortunately, created opportunities for corruption, nepotism and abuse of power. There is a need to ensure transparency and accountability in the exercise of powers by all higher education regulators. But this will notoccuruntil we develop a culture

of trust and respect between the regulators and higher education institutions. Mutual suspicion and deeply embedded institutional biases and prejudices along with historical context of the growth and development of regulations have ledtosignificant degree of distrust prevailing among all the stakeholders. This needs to change and the first step to promote greater transparency in the exercise of regulatory powers is to substantially allow greater participation of all stakeholders in the discussions related to the design and formulation of regulations.

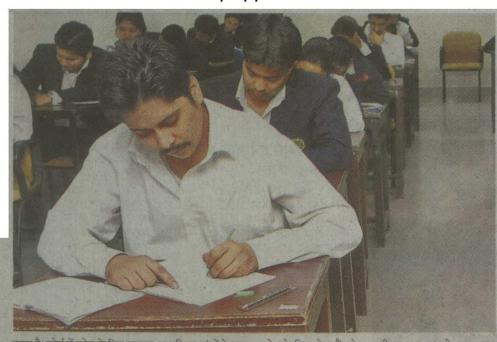
Promoting institutional mentoring by the regulators

The most important purpose of the regulatory framework for higher education is to promote excellence. Promoting excellence in higher education is possible through a process of institutional mentoring facilitated by the regulators. The current approach of tors and using monitoring, shaming and impositions of sanctions against the institutions is not helping the aspiration of Indian higher education sector to achieve excellence. The vast numbers of higher education institutions in India have diverse challenges due to their institutional trajectories. The higher education regulator should be able to see the difference among institu-tions and should adopt unique forms of institutional mentoring that build capacity and contribute

Indian higher education is poised to seek systemic reforms in its regulatory environment. Lead-ership from all the stakeholders in the higher education sector is essential. However, the government of India and the state governments, including the independent regulatory bodies and statutory institutions, are in a critical position to shape the regulatory environment in higher education for helping India achieve its full potential for excellence. Till such time this change occurs, we will be lamenting about the state of higher education in India without tangible change taking place in our institutions.

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Dainik Bhaskar ND 24/11/2014 P-11



आईआईटी मद्रास में एमए में प्रवेश के लिए होगा एंट्रेंस एग्जाम

इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, मद्रास ने ह्यूमैनिटीज और सोशल साइंसेज एंट्रेंस एग्जाम (एचएसईई) के लिए आवेदन आमंत्रित किए हैं। एचएसईई 2015 नाम की इस प्रवेश प्रक्रिया का आयोजन सत्र 2015 से शुरू होने वाले मास्टर ऑफ आट्स् प्रोग्राम में दाखिले के लिए किया जा रहा है। संस्थान डेवलपमेंटल स्टडीज और इंग्लिश स्टडीज में पांच वर्ष का इंटीग्रेटेड एमए प्रोग्राम संचालित

करता है। कोर्स में प्रवेश के लिए न्यूनतम 60 प्रतिशत अंकों के साथ बारहवीं उत्तीर्ण होना आवश्यक योग्यता है। नेशनल डिफेंस एकेडमी से जॉइंट सर्विस विंग का दो वर्ष का कोर्स कर चुके उम्मीदवार भी

प्रवेश के लिए योग्य हैं। योग्य उम्मीदवार 26 जनवरी, 2015 तक ऑनलाइन आवेदन कर सकते हैं। एचएसएसई 2015 का आयोजन 26 अप्रैल, 2015 को किया जाएगा।

Novodaya Times ND 24/11/2014 P-4

18 तक ऑनलाइन फॉर्म भरने की है सुविधा

आईआईटी जेईई कैंडिडेट की मदद के लिए दिल्ली में 10 सैंटर

नई दिल्ली, 23 नवम्बर (अभिषेक आनन्द): सीबीएसई ने कहा है कि दिल्ली में 10 सैंटर आईआईटी जेईई मेन कैंडिडेट की मदद के लिए काम कर रहे हैं। बोर्ड ने कहा है कि छात्रों की सुविधा के लिए दिल्ली के अलग-अलग इलाकों में केंद्र बनाए गए हैं, ताकि छात्रों को वहां पहुंचने में कोई परेशानी नहीं हो। छात्रों को यहां सुविधा देने के लिए कोई चार्ज नहीं लिया जाएगा।

बोर्ड छत्रों के ऑनलाइन फॉर्म भरने को प्रोत्साहित करने के लिए

भी यह प्रयास कर रहा है। दरियागंज के हैप्पी स्कुल, दिलशाद गार्डेन के नुतन विद्या मंदिर, जीटीबी एंक्लेव, जनकप्री में हैप्पी मॉडल स्कुल, कालकाजी और पंजाबी बाग में गुरु हरकुशन पब्लिक स्कूल, मयूर विहार में बाल भवन पब्लिक स्कूल, पडपडगंज में नेशनल मॉडल पब्लिक स्कूल, रोहिनी में जैन भारती पब्लिक स्कूल, आरके पुरम में रामजस स्कूल, विकासपुरी में वेद व्यास डीएवी पब्लिक स्कुल पर छात्र जा सकते हैं। बोर्ड के एक अधिकारी ने बताया कि परे देश में छात्रों की सुविधा के लिए ऐसे करीब डेढ सौ सैंटर बनाए गए हैं। बोर्ड ने छात्रों से अपील करते हए कहा कि सैंटर पर सभी प्रकार की सुविधा का इस्तेमाल कर सकते हैं।



US Still the Favourite with Indian Students

Ishani Duttagupta

There may have been a small blip over the last few years, but America is back on top as the most preferred overseas destination for Indian students for higher education. The 2014 Open Doors report on international educational exchange, published by the New York-based Institute of International Education (IIE) with the US department of state's bureau of educational and cultural affairs, shows an increase of 6% in 2013-14 over the previous year in the number of Indian students studying in US campuses, putting the number at 102,673. This reverses a three-year trend of declining numbers. "It's a combination of factors

"It's a combination of factors that has reversed the decline of Indian students. A few years ago we saw a severe devaluation of the Indian rupee against the US dollar, and many Indian students who were planning on going overseas were hard hit. Towards 2013, we saw the currency stabilise against the dollar and, as a result, Indian students are once again able to afford coming to the US. Indian students have always been very attracted to the science and engineering and research opportunities in US colleges and universities — especially at the graduate level," says Rajika Bhandari, deputy vice-president, research and evaluation at IIE.

The US enrols more than half of 200,000 Indian students studying around the world and is the leading destination for Indian students not only for the wide range of educational and career opportunities it offers, but also due to high social prestige and existence of extended family networks, the IIE research found.

Recent increase in number of Indian students going to the US is concentrated at master's level programmes in engineering, which offers attractive pathways to transition into the US. "This is a result of a growing ICT sector. in the US for career prospects and welcoming policy of a 17-month optional practical training (OPT) extension for STEM fields, which allows for easier work transition and expanding choices for Indian students as several universities have launched new one-year master's programmes in the last few years," adds Bhandari.

The upswing in the number of

Indians students going to study in the US is a result of a pent-up demand over the last few years, feels Dr Rahul Choudaha, chief knowledge officer at World Education Services (WES), a New York-based non-profit specialising in international higher education. "The economic and political environment in India was not encouraging enough to go abroad. However, with the change in political situation, there is an increasing sense of optimism and more students are using the opportunity to go the US," he says.

According to WES research, majority of Indian students are 'strivers', who are academically well prepared but lack the financial resources to fund their education abroad. "Hence, majority of Indian students are trying to minimise the total cost of education by finding scholarships and work opportunities and enrolling at masters level programmes as compared to

Experts see the recovery in the US economy as the most important factor that helped indian students make up their minds in favour of the US

bachelor's or doctoral programmes," Choudaha said. Even back home, experts see the recovery in the US economy as the most important factor that

helped Indian students make up their minds in favour of the US. "One of the main reasons for increase in enrolments in 2013-14, is the improvement in the US economy resulting in improved placements. The increased enrolments also result from a handsome increase in the issuance of F1 student visas in FY 2013, an increase of 56% over FY 2012," says Hyderabad-based education consultant Vijaya Khandavilli. The growth in the number of

The growth in the number of Indian students this year was mainly at the graduate (post-graduate) level while at the undergraduate stage, there are still very few Indian students who opt to go to America."The job market in the US has significantly improved and since most students go to the US to get better jobs, it is but natural the numbers are going up. And though the main growth has been towards the masters and MBA courses, undergraduate student numbers too are increasing," says Mumbai-based education consultant Karan Gupta.

AMERICAN DREAM

Indian students are once again looking for American degrees



Here's one possible indicator that the US economy has turned the corner—the number of Indian students to American colleges has registered a rise for the first time in five years. Economic analysts believe that Indians had lost faith in the American economy and the US job market, so many had decided to stay away post the 2008 global meltdown. This is part of a

recent report by the Institute of International Education which looks at Indian and Chinese students in American universities. There were close to 900,000 international students in American universities in 2013, of which five out of every ten were from India and China.

According to the report, Chinese students tend to choose undergraduate courses focused on business, while Indians opt for short graduate programmes in more technical subjects like science and maths. When they go for an international degree, Indians prefer to go for two-year graduate courses that lead to high-paying jobs. Close to 80% of Indian students in the US last year were aiming toget technical degrees inscience, technology, engineering or maths, the study showed. Chinese students leaned more towards business degrees. The report shows Indians are more cost-benefit conscious than the Chinese. The average student cost works out to \$250,000 overfour years. If no job is guaranteed, as was the case in the last four years, Indians stayed away. With employment numbers in the US showing an uptick, Indian students are once again looking for American degrees.

Brain drain

Number of Indian-origin international students highest in China, 2nd in US

NEW DELHI: India is the second leading place of origin for international students in the US with the country witnessing an increase in the number of Indian students' enrolment to its educational institutions by 6.1 per cent in 2013-14 after three consecutive years of decline.

China, however, has retained the top position for the fifth year in a row, with the country sending the highest number of students to study in the US. India had been the leading place of origin for international students in the US for eight years from 2001-02 through 2008-09.

"In 2009-10, the rate of growth from India levelled off, and China replaced India as the top sender and retains its position today," according to a latest report by the Institute of International Education (IEE), an independent not-forprofit organisation with a network of 19 offices and affiliates

worldwide. The IIE has been conducting an annual statistical survey of the international students in the US since its founding in 1919 and in partnership with the US Department of State's Bureau of Educational and Cultural Affairs since 1972.

According to IIE's "Open Doors" report for the year 2014, the majority of Indian students in the US study at the graduate level. "In 2013-14, their breakdown was: 12.3 per cent undergraduate; 59.5 per cent graduate students; 1.2 per cent others; 27 per cent OPT (Optional Practical Training)," it noted. In the 2013-14 academic year, a total of 1,02,673 students from India were studying in the US, up 6.1 per cent from the previous year, the report said.

Comprising 11.6 per cent of the total international students in US colleges and universities, Indians contributed \$3.3 billion to the US economy in 2013, the report noted, referring to statistics with the US Department of Commerce. The number of Indian students in the US is more than double what it was 15 years ago. In 1999-2000, as many as 42,337 students from India studied in the US.

Unlike India, a slim majority of Chinese students study at the graduate level in the US which continues to experience an upsurge in the number of undergraduate students from

the country. "In 2013-14, their (Chinese students) breakdown was: 40.3 per cenr undergraduate; 42.1 er cent graduate students; 5.4 per cent other; 12.2 per cent OPT (Optional Practical Training)," the report underlined.

Making up 31 per cent of international students studying in the US colleges and universities, Chinese students contributed \$8.04 billion to the US economy last year. DH News Service

HT.Com ND 24.11.2014 P-6

ONLINE COURSES IN INDIA

SWAYAM An initiative to provide affordable and quality online education to Indian citizens for free

Indi-Asian News Service

I ndia has officially jumped on to the open online courses bandwagon with the government announcing 'Swayam', an initiative that aims at providing affordable and quality education to citizens for free.

The move is a welcome step in India, which battles a shortage of infrastructure and qualified teachers in higher education, with the model also having the potential to democratise higher education, experts say.

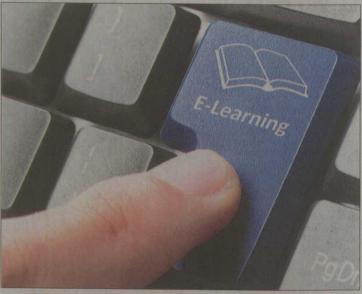
MOOCs or massive open online courses is a system aimed at unlimited participation and open access via the web. It does not always quantify as formal education but provides a platform to study quality courses from institutions offering them, usually for free.

The government had announced the programme as part of the initiatives undertaken by the ministry of human resource development (HRD) in its first 100 days in office with the aim to reach out to 10 million students.

HRD Minister Smriti Irani said that the initiative was undertaken in the light of concerns expressed over the quality and affordability of education. She also said that an Indianised version has been provided to students.

Welcoming the initiative, experts said that the availability of the model was a 'great asset' for motivated students.

"MOOCs have the potential to become a teaching/learning platform, with universities certifying the competence (degrees) and providing the opportunity for networking



Experts said that the availability of the model was a 'great asset' for students FILE PHOTO

and developing other skills. In this scenario MOOCs are like textbooks, "T.V. Prabhakar, professor, department of computer science and engineering at IIT-Kanpur, said.

Describing MOOCs to have the 'potential to democratize higher education', Pushkar (one name), a professor in the department of humanities and social sciences at BITS Pilani, said that it offers India's young population a platform to get themselves an education "despite the nation's failed higher education system".

He, however, added that young Indians and their parents are more interested in degrees than in education per se.

"So as long as one can get a degree after doing some MOOCs, it is all good," Pushkar said.

At a recently held higher education event, Irani had said: "Recognising the

need for affordable and quality education, the government has set up a platform of the Indianised version of MOOCs..."

She said in this, all the Indian Institutes of Technology (IITs), central universities, Indian Institutes of Management (IIMs) and selected best colleges and institutions of India will provide graduate, undergraduate and post-graduate courses free of cost to all Indians.

She added, that those seeking a degree or certification can sit for an exam at a nominal cost in that particular institution.

In the first phase of Swayam (Study Webs of Active-learning for Young Aspiring Minds) IIT-Bombay, IIT-Chennai, IIT-Kanpur, IIT-Guwahati, University of Delhi, Jawaharlal Nehru University and IIM Bangalore, among others, alone as well as with the help of faculty from foreign

universities, will offer courses in areas of management, social sciences, basic sciences, engineering education and energy.

Explaining the benefits, Richard C. Levin, CEO, Coursera, a global online education company, said its advantage is 'multi-faceted'.

"For one, MOOCs are recognised teaching programmes in renowned educational institutions, including Harvard and MIT; world-class institutions ensure globally accepted learning and recognition; and there's flexibility in learning time frame.

"Globally, MOOCs are seen as the future of higher education. India can further benefit from online education as Indian learners are hungry for skills to help them get a jobs or get into colleges/universities," Leven told IANS.

He said that the IT surge in India has fuelled significant demand for online coursea among the country's knowledge-seeking population, adding that India is Coursera's largest market outside the US.

But, can MOOCs be taken as a substitute for university education?

"I think yes eventually, as technology becomes more readily available. Right now, the way most of the MOOCs are organized is that there are platforms where one can create content and create lectures (and you) can pick what you want. But it's only a matter of time before a lot of these lectures are going to get organized into what a university

"And in that sense, some universities have already started offering online courses," Vineet Gupta, pro-vice chancellor of Ashoka University, Sonepat, said, adding that it was for the universities to see if they wanted to use MOOCs as a way to substitute university education or actual education in the classroom.

According to Prabhakar, while MOOCs will make good courses, taught by good teachers, available to the students, "we will have to make sure that these courses reach the remote parts of India. Otherwise, we will create another form of digital divide".

Deccan Herald ND 24/11/2014 P-12

Virus that makes us 'stupid' found

WASHINGTON, PTI: Scien tists have found a virus that could be making humans 'stupid' by altering genes linked to brain function.

The virus, Chlorovirus ATCV-1, was previously found only in green algae - simple plants that live mostly in water -but researchers have now detected it in humans, where it seems to alter genes governing cognitive function.

Researchers at the University of Nebraska and John Hopkins Medical School were confound the DNA of ATCV-1 virus in human throat, Tech Times reported.

They conducted a test of 92 healthy individuals and found the virus in 40 people. Individuals who were infected with the virus performed 10 per cent slower in visual processing

The study found no link between reduced brain function and factors such as variances in sex, income, education level, race and smoking cigarette.

Scientists also injected the virus in the digestive tracts of ducting a separate study but lab mice. They found that when

these mice were put in a maze, they took 10 per cent more time finding their way out when compared to normal

Researchers said the impact similarity of the virus in hu-mans and mice determines that ATCV-1 virus impairs the brain function to a certain level and makes people more stupid.

Professor Robert Yolken at Johns Hopkins Medical School, who is also the study author, noted that millions of viruses live in human body and many of them have never been exam-



Times of India ND 24/11/2014

Won't make Sanskrit compulsory: Smriti

'German Will Be Taught As 3rd Language'

New Delhi: Taking on her critics, human resource development minister Smriti Irani on Sunday dismissed charges that education was being saffronized even as she turned down demands that Sanskrit be made compulsory in the curriculum.

"Those who accuse me of being an RSS mascot or RSS representative possibly want to deflect the attention from the good work that we have done... this agenda will be flagged and I will be whipped for as long as there is a need to keep attention diverted away from the good work. I am ready for it. I have no prob-



Those who accuse me of being an RSS mascot possibly want to deflect the attention from the good work... I will be whipped for as long as there is a need to keep attention diverted... I am ready for it **SMRITI IRANI**

HRD MINISTER

lem," she said in New Delhi.

Answering questions on the controversial decision to replace German with Sanskrit as the third language in some 500 Kendriya Vidyalavas, Irani said teaching of German under an MoU signed in 2011 had been in violation of the Constitution. An investigation has already been launched to find out how the MoU came to be signed.

Responding to demands that Sanskrit be made a compulsory language, the ministersaid that the three language formula was very clear that any of the 23 Indian languages listed in Schedule 8 of the Constitution could be opted for.

But she reiterated that German will continue to be taught as a foreign language. "... we are teaching French, we are teaching Mandarin, we teach German in the same way. For the life of me, I can't understand why people are not understanding what I am saving." PTI