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देश की आठ आईआईटी के पास नहीं है स्थायी परिसर

धीरज कनोजिया

नई दिल्ली। सरकारें राजनीतिक फायदे के लिए घोषणाएं तो कर देती है लेकिन इन पर अमल में सालों साल लग जाते हैं। इस लेट-लतीफी का सबसे बड़ा उदाहरण मानव संसाधन विकास मंत्रालय की ओर से 8 नए आईआईटी संस्थान के निर्माण का मामला है।

पूर्ववर्ती यूपीए सरकार ने साल 2008 में इन संस्थानों के प्रस्ताव को मंजूरी दी थी लेकिन आज तक इनके लिए स्थायी परिसरों का निर्माण नहीं हो सका है। तीन आईआईटी की इमारत का काम तो अभी तक शुरू नहीं हो पाया है। इसका नतीजा यह हुआ कि आठों संस्थानों के निर्माण की कुल लागत जो कि 6080 करोड़ रुपये आंकी गई थी, वह अब बढ़कर 15664 करोड़ रुपये हो गई। करोड़ों के नुकसान के लिए मानव संसाधन विकास मंत्रालय भी कम जिम्मेदार नहीं है, जिसने संशोधित लागत का सिर्फ 18 फीसदी फंड ही राज्यों को दिया है। देश में आईआईटी के लिए हर साल लाखों बच्चे आवेदन करते

6 सालों से अस्थायी परिसर में कराई जा रही पढ़ाई

2008 में दी थी यूपीए सरकार ने मंजूरी

है, लेकिन अस्थायी परिसर होने से तय क्षमता के मुताबिक छात्रों की भर्ती नहीं हो पा रही है। वर्ष 2008 में बिहार, आंध्र प्रदेश, राजस्थान, पंजाब, हिमाचल प्रदेश, ओडिशा, गुजरात और मध्य प्रदेश में आठ नए आईआईटी बनाने का प्रस्ताव केंद्रीय मंत्रिमंडल से मंजूर हुआ था। इन सभी आईआईटी को छह साल में बनकर तैयार हो जाना चाहिए था।

आठ में से तीन रोपड़, इंदौर और राजस्थान की आईआईटी में तो इमारत का निर्माण बिल्कुल भी नहीं हुआ है। बिहार, आंध्र प्रदेश और राजस्थान में आईआईटी बनाने की प्रक्रिया केंद्र स्तर पर 2006 से ही शुरू हो गई थी। इस पूरी परियोजना में विलंब का प्रमुख कारण लालफीताशाही ही है।

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अब बदल रहा आईआईटी प्लेसमेंट का ट्रेंड

कई छात्रों ने चयन के बाद नियुक्ति पत्र वापस किया

चेन्नई. भारतीय प्रौद्योगिकी संस्थान मद्रास (आईआईटी) में चल रहे प्लेसमेंट में सबसे आश्चर्य जनक बात यह निकल कर आई है कि इस वर्ष बड़ी संख्या में छात्रों ने दुनिया की बहुराष्ट्रीय कंपनियों के बड़-बड़े ऑफर केवल इस बिना पर ही छोड़ दिया कि अभी उन्हें और पढ़ना है। यही नहीं इनमें से नौ ऐसे छात्र हैं, जिन्होंने कहा कि उन्हें अगले वर्ष सिविल सेवा सर्विस की परीक्षा में बैठना है। इसलिए किसी कंपनी की नौकरी करने के बाद सिविल सेवा सर्विस की तैयारी करना संभव नहीं होगा। जी हां इस बार प्लेसमेंट का ट्रेंड काफी बदला हुआ है। जहां कुछ छात्र सुकून की नौकरी के लिए बड़े ऑफर ठुकरा हैं तो वहीं दूसरी ओर कुछ उच्च शिक्षा के लिए कंपनियों के बड़े स्वीकार नहीं कर रहे हैं। इस संबंध में आईआईटी मद्रास के प्रशिक्षण एवं प्लेसमेंट विभाग के सलाहकार प्रोफेसर बाबू विश्वनाथन ने कहा कि हमने इस वर्ष छात्रों के लिए यह विकल्प दिया है यदि उनका इस वर्ष प्लेसमेंट में चयन हो गया है, लेकिन वे ज्वाइन नहीं करना चाहते हैं तो वे अगले वर्ष फिर से प्लेसमेंट में बैठ सकते हैं। इसके लिए अलग से पंजीकरण कराने की जरूरत नहीं होगी।

लचीलेपन की मांग

प्रोफेसर विश्वनाथन ने कहा कि शिक्षा पद्धति में लचीलेपन की मांग अधिक है और बहुत जरूरी भी है। उन्होंने कहा कि इस वर्ष नौ ऐसे छात्र हैं, जिनका चयन हो गया था, लेकिन वे सिविल सेवा सर्विस परीक्षा में बैठना चाहते हैं इसलिए उन्होंने अपनी नियुक्ति पत्र वापस कर दिया है। उन्होंने कहा कि छात्रों के सपनों को साकार करने के लिए यह एक अच्छा विकल्प है। उन्होंने यहां तक कहा कि इस संबंध में वे अगले वर्ष दुनिया भर की बहुराष्ट्रीय कपनियों के प्रमुखों के साथ एक बैठक कर इस संबंध में और विचार-विमर्श करेंगे।

भविष्य के लिए अच्छा

इस लचीलेपन के संबंध में आईआईटी मद्रास के पूर्व डीन प्रोफेसर एल.गणेशन ने कहा कि प्लेसमेंट में लचीलापन छात्रों के भविष्य के लिए एक अच्छा कदम साबित होगा। हर हाल में हमारी कोशिश रहती है कि छात्र का करियर अच्छी दिशा में आगे बढ़े। उन्होंने कहा कि हमारी शिक्षा पद्धति हमेशा से अधिक लचीलेपन की मांग करती रही है। इस हिसाब से आईआईटी ने यह एक अच्छा कदम उठाया है। यह लचीलापन छात्रों को अपना भविष्य सुधारने में एक अहम भूमिका निभाएगा।इस प्रकार की नीति का स्वागत किया जाना चाहिए।

ऑफर दर में वृद्धि

चालू प्लेसमेंट सत्र केदौरान दुनिया भर की कंपनियों ने यहां के छात्रों से साक्षात्कार किया है। जहां तक कैंपस में आने वाले कंपनियों की संख्या की बात है, इस पर प्रोफेसर बाबू विश्वनाथन ने कहते हैं कि अब तक जितनी कंपनियां कैंपस में आई हैं, उनकी संख्या से हम खुश हैं। उन्होंने कहा कि उन्हें इस बात से भी खुशी है कि इस बार प्लेसमेंट के लिए घरेलू कंपनियां बड़ी संख्या में कैंपस में आ रही हैं।

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वीडियो पाठशाला बदलेगी शिक्षा का संसार

मुकेश केजरीवाल, नई दिल्ली

◆ दो लाख घंटे के पाठ सरकारी वेबसाइट पर उपलब्ध हुए

देश में भी पढ़ाई के अंदाज में जल्दी ही व्यापक बदलाव आने वाला है। मानव संसाधन विकास (एचआरडी) मंत्रालय ने छात्रों को घर बैठे पढ़ाई करवाने के लिए पूरे दो लाख घंटे के वीडियो पाठ ऑनलाइन उपलब्ध करवा दिए हैं। इनमें अंग्रेजी बोलने के साधारण पाठ से लेकर इंजीनियरिंग और विज्ञान के भारी-भरकम लेक्चर तक शामिल हैं। पूरी सामग्री को वेबसाइट पर उपलब्ध कराने के बाद अब मंत्रालय जल्दी ही इस 'आभासी कक्षा' के विद्यार्थियों को स्नातकोत्तर स्तर तक के सर्टिफिकेट भी दिलाने की व्यवस्था कर रही है।

इन अलग-अलग वीडियो पाठ को फिलहाल 'नेशनल प्रोग्राम ऑन टेक्नालॉजी एनहांस्ड लर्निंग' (एनपीटीईएल) की वेबसाइट पर उपलब्ध करवाया गया है। मंत्रालय के एक वरिष्ठ अधिकारी बताते हैं, 'इन्हें ऑनलाइन उपलब्ध करवाने के बाद अब लोगों को इसके बारे में सूचना पहुंचाने की बारी है।' ये सभी पाठ भारतीय प्रौद्योगिकी संस्थान (आइआइटी) व भारतीय प्रबंधन संस्थान (आइआइएम) जैसे राष्ट्रीय स्तर के शैक्षणिक संस्थानों में तैयार किए गए हैं। इन्हें तैयार करने में सूचना प्रौद्योगिकी और संचार के विशेषज्ञों की भी मदद ली गई है। इंजीनियरिंग, मैनेजमेंट, विज्ञान और सामाजिक विज्ञान तक के स्नातकोत्तर स्तर तक के दर्जनों पाठ्यक्रम इस पर उपलब्ध हैं। जल्द ही इन्हें इस तरह व्यवस्थित कर लिया जाएगा, जिससे इनकी मदद से अलग-अलग स्तर के विभिन्न पाठ्यक्रम पूरे किए जा सकें। इन पाठ्यक्रमों के लिए फिलहाल सरकारी मान्यता प्राप्त सर्टिफिकेट उपलब्ध नहीं करवाई जा सकती। इस कमी को दूर करने के लिए दूरस्थ शिक्षा संबंधी कानूनी प्रावधानों में संशोधन की तैयारी की जा रही है। मंत्रालय इसे 'स्वयं' (स्टडी वेब ऑफ एक्टिव लर्निंग फॉर यंग एस्पायरिंग माइंड्स) योजना का नाम देकर बड़े स्तर पर इसकी शुरुआत करने की तैयारी में है। पश्चिम के देशों में ऐसे मैसिव ओपन ऑनलाइन कोर्स (एमओसीसी) पहले से लोकप्रिय हो रहे हैं। मंत्रालय ने पिछले कुछ दिनों में कई अंतरराष्ट्रीय विश्वविद्यालयों के साथ भी इसमें साझेदारी के लिए समझौते किए हैं। हार्वर्ड, बर्कले और एमआइटी जैसे अंतरराष्ट्रीय विश्वविद्यालय पहले से ही 'ईडीएक्स' के नाम से बेहद सफल ऑनलाइन पाठ्यक्रम कार्यक्रम चला रहे हैं। इसमें भारत के आइआइटी बंबई, आइआइएम, बेंगलुरु व बिट्स पिलानी भी जुड़े हैं।

IITs out of bounds for students born abroad

http://timesofindia.indiatimes.com/home/education/news/IITs-out-of-bounds-for-students-born-abroad/articleshow/45508987.cms

CHENNAI: Smriti Muralishankar, a Class 12 student in Coimbatore, has spent the last four years burning the midnight oil to prepare for one of the toughest exams in the country - the JEE. Only two weeks ago did she realise that she was not eligible to write the test as she was born abroad and didn't have an Indian citizenship. Shreya Venkatesh, who has been studying in a Chennai school for the last 10 years, also found herself in a similar situation when she came to know that only Indian citizens can take the JEE (Main), which serves as the screening test for JEE (Advanced), mandatory for entry into IITs.

The IIT dreams of these two and thousands across the country have been shattered because they were born abroad, to Indian parents who went overseas for higher education and jobs. They may have been studying in India for years now, but when it comes to applying for higher education in central and state institutions these students find themselves denied of opportunities open to their peers born in India.

For years now, such students have been paying a hefty fee (around nine times of what is paid by Indian students) to study in a state institution. But, since the JEE was split in 2014, they have lost out on the opportunity to sit for the IIT entrance test.

Foreign, Overseas Citizenship of India (OCI) and Person of Indian Origin (PIO) category students are not eligible for admission to NITs, IIITs and other centrally-funded institutions through JEE (Main). They can only be admitted through the Direct Admission to Students Abroad (DASA) channel using their SAT 2 scores. But, admission to IITs is only through JEE (Advanced), which requires the students to figure among the top 1.5 lakh candidates in JEE (Main).

"We came to India four years ago mainly because we wanted Smriti to prepare well and join an IIT. She has been putting in a lot of effort. But, it looks like all the money and effort are a waste," said Aravinda Muralishankar, Smriti's mother. "We want her to be given the chance to take the exam, regardless of whether she gets a seat or not," Muralishankar added.

When Shreya Venkatesh realised that she is unlikely to be sitting for the JEE (Main) or JEE (Advanced), she started preparing for the SAT 2 test to get a seat in an NIT or IIIT. "It's not fair. Not only is she missing an opportunity to seek admission to IITs, but we also have to pay in dollars as we have to go through the foreign nationals category. We are Indians and living in Chennai, but our children are denied any opportunity join an Indian institution," said Shreya's mother, Menaka Venkatesan.

An official with JEE office at IIT-Madras said, "A candidate can gain admission to IITs only through JEE (Advanced). The candidates should address their queries to the board handling JEE (Main)." Repeated phone calls to the JEE (Main) office went unanswered.

Weak fundamentals producing unskilled engineers

http://timesofindia.indiatimes.com/city/hyderabad/Weak-fundamentals-producing-unskilled-engineers/articleshow/45508332.cms

HYDERABAD: The country's apex technical education regulator All India Council for Technical Education (AICTE) chairman SS Mantha on Saturday blamed the 'weak fundamentals' of the Indian education system for the rising number of unskilled engineering students passing out of the plethora of engineering colleges in India.

"In the name of access, we have provided every child an opportunity to get into an engineering college. Suppose I tweak that paradigm a little and raise the bar from 50% to 75% to get into an engineering college ... Can any political system sustain that? Tomorrow there will be probably huge agitations. So on one side you say that the supply side should not be tweaked but on the other hand you want quality," he said, while speaking at the golden jubilee programme of the Computer Society of India - CSI-2014 - here.

The top government official also pointed out that many of the top universities in southern India have removed subjects like engineering graphics and applied mechanics, which form the building blocks for any engineer. In fact, the National Employability Report on engineering graduates released by an employability solutions company, 'Aspiring Minds', in July 2014 had revealed that only one out of four engineering graduates in India is employable. This apart, he said there is expected to be a major demand-supply mismatch of educational institutions in the coming days as currently the gross enrollment ratio is 20, which means only 20 out of 100 students make it to colleges and universities, and this number is expected to rise.

He pointed out that technology can be effectively used to improve the access to education in India not just at the university but also at the primary and secondary levels and the Union government has initiated programs such as National Digital Literacy Mission and SWAYAM (study webs of active-learning for young aspiring minds), among others, to address this issue.

"India has more number of mobiles than passbooks. Hence, the potential of this device has to be harnessed. Creating a digital Gurukul today would work wonders. Children won't have to lose out on studies and can also help their folks in their work in rural areas. Creating Wi-Fi belts in villages, using television, radio and computers as teaching aids too can help," he said.

AICTE bats for new tech colleges

http://www.deccanchronicle.com/141214/nation-current-affairs/article/aicte-bats-new-tech-colleges

Hyderabad: At a time when engineering colleges in Telangana and Andhra Pradesh are shutting down due to lack of students, Dr S.S. Mantha, the chairman of the All-India Council of Technical Education, opined that vacancies in institutions were “just a passing phase.” Pitching for expansion, he said existing capacity would not be able to

accommodate all students, if more of them start joining engineering colleges.

Dr Mantha was speaking at the annual convention and golden jubilee of the Computer Society of India at the JNTU-H. He admitted that expansion of the system brought its own problems, but added that expansion was needed and inevitable.

“There has been an expansion of the education system in the country over the past few years and like any other system, it has its own problems,” Dr Mantha said. He has been vociferous in his attempts to project the AICTE in positive light in the last couple of years. But the situation in the two states of Telangana and Andhra Pradesh is difficult. Lakhs of seats have fallen vacant each year as there are more seats than the number of engineering aspirants. This year, in the Telangana state, there were about 68,516 engineering seats but only 52,839 seats were filled leaving 15,677 seats vacant. This is excluding the 174 colleges that were earlier barred from admitting students. In AP, 57,382 seats went vacant as just 63,190 students sought seats from the total of 1,20,572 seats.

Asked about the huge number of vacancies, Dr Mantha said, “If the counselling would have held on time, many more students would have taken admission. The state governments need to look at various mechanisms to increase quality and to retain students.”

IISc scientists help peer into insides of HIV-infected cell

http://www.business-standard.com/article/current-affairs/iisc-scientists-help-peer-into-insides-of-hiv-infected-cell-114121400609_1.html

A new biosensor can measure what is going on within HIV-infected cells in real-time and also provide insight on the interactions between the AIDS virus and the tuberculosis causing bacteria within the cells.

Researchers from IISc, Bangalore, the International Centre for Genetic Engineering and Biotechnology, New Delhi and Jamia Millia Islamia, New Delhi have exploited this non-invasive biosensor that can measure what is going on within HIV-1 infected cells in real-time. This technology can offer insights which can help in controlling the AIDS infection besides insight on the interactions between HIV-1 and TB-causing bacteria, Mycobacterium tuberculosis (Mtb), says a release by Gubbi Labs.

Since its discovery, Acquired Immune Deficiency Syndrome or AIDS has caused an estimated 36 mn deaths worldwide (as of 2012). Its causative agent, the Human Immunodeficiency Virus (HIV), has thus been a hot topic of research. Human body produces oxygen free radicals called Reactive Oxygen Species or ROS, during routine cellular metabolism.

When not regulated properly, accumulation of these ROS can lead to oxidative stress. Heightened oxidative stress is one of the primary causes of reactivation of HIV-1 in infected cells. Oxidative stress also decreases proliferation of disease fighting immune cells; besides, it causes loss of memory in immune cells. These factors reduce the efficiency of the immune response toward the HIV. A major cellular antioxidant called glutathione (GSH) functions as a protective shield against the oxidative stress.

GSH levels in infected cells and tissues are indicators of the level of infection. The team has devised a non-invasive biosensor methodology for precise measurements of GSH levels within HIV-1 infected cells. Earlier methods use whole cell or tissue extracts, which destroy detailed information related to the GSH levels in different areas within an infected cell.

Study discovered that a modest increase in oxidative stress is sufficient to reactivate virus from latency. This may allow

researchers to adopt a "shock-and-kill" strategy in which virus could be reactivated by oxidative stress inducing compounds and subsequently killed/flushed by current anti-HIV drugs. The fluctuation of GSH levels detected by the biosensor also helps understand the expression of antioxidant genes and related pathways during latent and active stages of infection.

The sensitivity and specificity of this biosensor could be further used in understanding the physiological changes in HIV-1 infected cells and the mechanism of drug action. "Importantly, we also discovered that Mycobacterium tuberculosis, another major human pathogen, specifically disturbs glutathione balance to increase the replication of HIV. "Since TB is the major cause of HIV related deaths, our findings have major mechanistic and therapeutic potential for both TB and AIDS (among the main causes of human death)," said one of the researchers.

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New entry criteria

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The Indian Institute of Technology (IIT) Delhi has changed the curriculum as well as admission criteria of one of its MBA programmes. Its two-year MBA in management systems is now open to aspirants from all disciplines.

The institute's department of management studies (DMS) offers two more degrees — a two-year MBA in telecom systems management and a three-year MBA in technology management for working professionals. Until now, all three programmes required applicants to have a background in science and technology and/or commerce and management.

"However, we realised that industry considered the management systems MBA as being similar to a general management degree. Hence, we decided to alter the curriculum to reflect industry needs and subsequently, changed the admission criteria as well," explains Kanika T Bhal, head, DMS. After consulting management academics and industry experts for nearly two years, the department revamped the curriculum to fulfil the functions of a general management programme, she adds. The syllabi of the other two degrees, too, have been revised.

> IIT Delhi has thrown open one of its MBA programmes to candidates from all disciplines

While the admission criteria of the two niche programmes remain unchanged, the degree in management systems is now offered to all aspirants. The entry requirements would not only focus on the CAT score but also weigh a candidate's academic performance in class X and XII as well as Bachelor's exams.

"While CAT would certainly form the major component of assessment, we would like to assess a candidate holistically. Therefore, an aspirant's extra-curricular activities, too, will be considered," informs Bhal. "The purpose is to ensure that a candidate is judged on academic consistency as against a score in a single examination. We want to be sure about the candidate's ability to perform in different examinations in different circumstances."

Business Standard ND
15/12/2014 p-7

IIT-M launches Biotech Incubator

The Indian Institute of Technology, Madras (IIT-M) has launched a Biotechnology Incubator to support the biotechnology start-ups to start their business and grow to a higher level. The Incubation Cell of IIT-M is currently incubating 30 start-ups a year and with the launch of the Incubator and one more incubator to join soon, this is expected to go up to 50 firms a year, said Ashok Jhunjhunwala, faculty-in-charge, IIT-M Research Park and Co-Chairman of IIT-M Incubation Cell. The Biotech incubator is aimed at helping start-ups and SMEs develop globally competitive products and launch them into the market.

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Indore IIT grad bags ₹1.7cr Google job

Indore: A final-year computer science graduate from Indian Institute of Technology (IIT) Indore bagged a job with Google at an annual package of Rs 1.7 crore per annum.

IIT-I's Gaurav Agrawal from Bhilai is rubbing shoulders with an IIT-BHU student who fetched an annual package of Rs 2.03 crore from Oracle and an IIT-Bombay girl who got a job offer of Rs 2 crore from Facebook. The offer is the highest received by any IIT-Indore student in the last three years of placement seasons.

Ashish Gaur

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Comet landing is top physics event of 2014

Mag Calls Rosetta Mission Breakthrough Of The Year For Its Impact On Space Science

ESA via Getty Images

A GIANT LEAP

London: The first ever landing of a man-made probe onto a comet by the ESA's Philae spacecraft has been named the Physics World Breakthrough of the Year for 2014.

Nuclear fusion with lasers and a tractor beam are also among the 10 physics breakthroughs of the year, as chosen by a leading science magazine.

The historic achievement by scientists working on the Rosetta mission was singled out by the Physics World magazine for its significance and fundamental importance to space science. The landing of the Philae probe, which captivated not only the physics community but millions of people worldwide, was the culmination of 10 years' work by scientists at the European Space Agency (ESA), who successfully guided the Rosetta spacecraft through the inner solar system to finally meet up with Comet 67P/Churyumov-Gerasimenko in August.

On November 12, a signal was received in the ESA control room confirming that the Philae lander had completed its seven-hour descent and had landed safely on the surface of Comet 67P. While the landing was not as smooth as mission scientists would have liked, the Philae lander still managed to collect a large amount of data before entering hibernation mode.

"By landing the Philae probe on a distant comet, the Rosetta team has begun a new chapter in our understanding of how the solar system formed and evolved - and ultimately how life was able to emerge on Earth," Dr Hamish Johnston, editor of physicsworld.com, said. "As well as looking forward to the fascinating science that will be forthcoming from Rosetta scientists, we also acknowledge the technological tour de force of chasing a comet for 10 years and then placing an advanced laboratory on its surface," said Johnston.

The Physics World editorial team has recognized a further nine achievements from 2014 in a range of topics from nuclear physics to nanotechnology.

The other breakthroughs include: Quasar shines a bright light on cosmic web; neutrinos spotted from Sun's main nuclear reaction; laser fusion passes milestone; first acoustic "tractor beam" that can pull an object by firing sound waves at it; lasers ignite 'supernovae' in the lab; electrons' magnetic interactions isolated at long last; disorder sharpens optical-fibre images; and, data stored in magnetic holograms and quantum data compressed for the first time also made it to the list for the first time. PTI