Newspaper Clips
September 10, 2014

Hari Bhumi ND
10/09/2014 P-2

आईआईटी-आईआईएम निदेशकों से मुखातिक होंगी स्मृति ईरानी

नई दिल्ली (ब्यूरो)। केंद्रीय मानव संसाधन विकास मंत्री स्मृति ईरानी 12-13 सितंबर को भारतीय प्रौद्योगिकी संस्थानों (आईआईटी) और भारतीय प्रबंध संस्थानों (आईआईएम) के निदेशकों के साथ बैठक करेंगी। इसमें तकनीकी शिक्षण संस्थानों को लेकर नई सरकार की नीति और उनके द्वारा तैयार किए गए रोडमैप को लेकर चर्चा की जा सकती है। एचआरडी मंत्रालय के सूत्रों ने बताया कि चंड़ीगढ़ में होने वाली बैठक में स्मृति ईरानी आईआईटी, आईआईएम निदेशकों के अलावा देश के तमाम केंद्रीय विवि के कुलपतियों के साथ बैठक करेंगी। इसमें विवि के कामकाज में समानता स्थापित करने पर विचार-विमर्श हो सकता है।

HRD minister, 39 university VCs to draw new vision for higher education

http://timesofindia.indiatimes.com/home/education/news/HRD-minister-39-university-VCs-to-draw-new-vision-for-higher-education/articleshow/42062297.cms

NEW DELHI: HRD minister Smriti Z Irani will be in a retreat with vice-chancellors of 39 central universities in Chandigarh for two days, September 12-13, to discuss ministry's new vision on higher education, take stock of their function and prepare the road ahead.

Irani already had similar interactions with directors of IITs and IIMs. The minister is likely to stress on greater synergy between higher and school education.

One of the key issues to be discussed will be the report by the AM Pathan committee that had prepared a single legislation to govern all central universities. Currently, each central university is governed by its own Act passed by Parliament. Pathan's report and draft bill was unanimously criticised within the HRD ministry last year. It was felt that the proposed legislation will not only take away the historical character of many universities but will also compromise their autonomy. The bill was also criticized for proposing a tedious process of governance. For instance, it had said the office of chancellor should be abolished and replaced by a Council of VCs (CVCs) to be headed by HRD minister. It had also suggested a separate recruitment board for appointment of teachers and non-academic staff in central universities.

The ministry will also impress VCs about the need to get accreditation from National Assessment and Accreditation Council. Sources said, when it comes to quality, central universities cannot be getting different treatment than private universities.

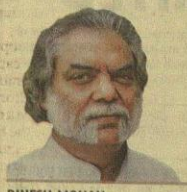
The retreat will see Irani insist on time-bound implementation of new government's emphasis on technology-enabled higher education. In this regard, implementation of SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) programme is high on priority. Under this scheme to be launched on September 25, professors of IITs/IIMs and central universities will offer online courses free. A small fee will be charged in case learner requires a verified certificate. In the first phase, IITs of Bombay, Madras, Guwahati, universities of Delhi, Manipur, Punjab and Banaras Hindu University will be offering varied courses.

National E-Library platform will also be discussed with VCs. E-Library is Irani's pet scheme under which an online portal will be launched to democratize access to knowledge. Top class content from institutions such as NCERT, CBSE, IITs, IIMs and other central universities will be hosted on this platform. Also on the agenda will be the ministry's new UNITE (University Network Initiative to Enhance Education) programme that proposes to make 20 classrooms in 21,000 colleges wi-fi enabled and give 600 universities a full-campus wi-fi Local Area Network.

Business Standard ND 10/09/2014 P-10

The mirage of 'world-class' research

By exhorting our academia to produce 'world-class' work, we are focusing only on the supply side. The real issues lie in the demand side



DINESH MOHAN

Delivering the Sir Asutosh Mookerjee Memorial Lecture to mark his 150th birth anniversary celebrations organised by the Bharatiya Vidya Bhavan and Asutosh Mookerjee Memorial Institute, the President of India is reported to have remarked that: "It saddens me when I find that in the list of 200 world-class universities... a single Indian institution does not find place. Why? That is the question that haunts me," and further that "It makes me very sad and I almost repeat like a parrot in every academic congregation."

The solution, according to the president (and everyone else in the country), was greater collaboration between institutes, focus on research and innovation and better academia-industry collaboration.

It appears that I have been living in a zoo of parrots ever since I joined the Indian Institute of Technology (IIT) Delhi more than three decades ago. The same complaint and solution have been repeated thousands of times by everyone — politicians, industrialists, bureaucrats and even some scientists. If the same views get repeated over decades, it stands to reason that something is not going right. There must be something in our environment that is different from societies that we see as doing well as far as research and development (R&D) in science and technology (S&T) is concerned. Some of the more obvious attributes of "successful" societies that are different from ours can be listed as follows:

- More than 90 per cent of all children attend government schools and obtain a free education
- Almost all those who want to pursue a scientific career and show an aptitude for research are able to get a free education up to PhD level
- Most public sector organisations offer a large number of job opportunities requiring a research degree
- Most branches of the government invest heavily in research centres in academic institutions.

A FUTURE IN R&D? A file picture of underprivileged schoolchildren in Moradabad. The blackboard reads *"Gareeb bachho, samay aa gaya, khoob pado"* (poor children, your time is now, study hard). Our system is such that children from lower-income backgrounds who have an aptitude for a career in science and technology remain submerged in the deadweight of disadvantage

The privatisation of education in India from the primary to the tertiary level has ensured that we cannot identify the best talent from our population. Children from lower-income backgrounds who have a superior native aptitude for a career in S&T remain submerged in the deadweight of disadvantage and their skills are lost forever. Relative skills can be judged only when children have similar opportunity. It does not really matter whether the schooling is "excellent" or "mediocre". Because of this unequal paid for schooling, we probably lose a majority of the brains available in the country.

Rich people's children do not opt for mundane research jobs (most are) in any country of the world. In all societies, the bulk of S&T workers come from the middle and lower middle-income families. These young men and women look for permanent stable jobs. Those who have the burden of loans or family obligations do not opt for higher degrees. I have lost a number of bright students who could have become good researchers since their parents had already spent far too much on their school and undergraduate education. In a society like India, where most families live at the margin, a career in S&T is not viable for most youngsters who have to start earning as soon as possible.

Planning a career in research is not an attractive option for many of those inclined that way in India. The only job option available easily is that in teaching. A reasonable proportion of those with interest in S&T do not like the idea of teaching and will prefer pure research careers. Besides the Council of Scientific and Industrial Research and Defence Research & Development Organisation laboratories there are very few research jobs around. None of the ministries, public sector organisations, or industrial groups in India have many research jobs on offer. We produce around a thousand PhDs in engineering a year and many of them have to go abroad to find a decent job. If we started producing 6,000 or more (like China does) there would be no jobs for them.

Rich people's children do not opt for mundane research jobs (most are) in any country of the world. In all societies, the bulk of science and technology workers come from the middle and lower middle-income families

The recently released National Transport Development Policy report brings up this issue starkly in its chapter on human resource development. The statistics show that in per capita terms, Indian S&T output is way behind other BRIC countries. The report also shows that India is bereft of technical expertise and institutions in the public sector, where it is needed. For example, the department of transport employs thousands of scientists in the US, and the ministry of railways over 10,000 in China, but the ministry of road transport and highways (MoRTH) and the ministry of railways in India do not have a single respectable job opening for someone with a PhD. In most western countries, many with a PhD in S&T consider a job with their environmental protection agency, the bureau of standards, or their municipality a prized job. When did you last meet a person dying to get a job with the Indian Central Pollution Control Board, Bureau of Indian Standards or MoRTH?

The fact is that all countries with a successful manufacturing and research activity provide high-level research opportunities in all areas of public interest. These job openings provide a constant source of employment for scientific talent, give informed information for government decision-making, and provide subsidised trained talent to the private sector. A large number of well-trained personnel in private industry have shifted from the Indian public sector.

Research studies from Europe and the US show that industry-university-government collaboration takes place more often when professionals of similar calibre work in all the three organisations. People with similar backgrounds and professional friendships from university days, but working in different organisations, make for higher probability of cross organisation collaboration. Typically, a student spends four to six years in graduate school and over that period comes across most of the people who are working in a specific area at conferences and seminars. That makes it easier for those who opt for government or industrial careers to reach out to their counterparts in research institutions. Such a mechanism is in its nascent stage in India.

S&T policy studies also show that private industry is more likely to approach those groups in academic institutions that have had a successful history of grants from government organisations. This ensures that the infrastructure and expertise already exists in that group and the private sector gets its work done at a reasonable cost. Research collaboration between different groups is more likely to be successful if the people involved develop mutual trust and hopes of continuing their collaboration. This happens more often when the industrial or commercial group funding the work has a policy of investing more than two to three per cent of its turnover on S&T. The number of private or public sector companies in India that have this level of investment in research and development is almost negligible.

Exhorting our academic institutions and Indian scientists and engineers to produce "world-class" work is focusing on the supply side only. Unless we take care of the demand side and other structural problems, we are not really going to get anywhere. In the 1950s and 1960s, we had the courage and foresight to establish a large system of S&T infrastructure under very difficult circumstances. We will have to do something similar once again with a much more ambitious vision.

The writer is Professor Emeritus, IIT Delhi

Deccan Herald, ND 10/09/2014 P-7

Big jump in South students getting IIT admissions

Bihar, Maharashtra and Gujarat also sent more students to the premier tech schools this year

Prakash Kumar

NEW DELHI: The number of students from the southern states qualifying for admission to the premier Indian Institutes of Technology (IITs) had increased in the last one year compared to their northern counterparts, with the exception of Bihar, Maharashtra and Gujarat.

A comparative analysis of the data compiled by IIT-Kharagpur and IIT-Delhi on JEE (Joint Entrance Examination)-Advance 2014 and 2013 respectively, indicates that the number of students from Karnataka who qualified in the nationwide test was almost double (47.95 per cent) this year, compared to last year. Kerala saw an increase of 61 per cent this year.

As many as 506 students from Karnataka qualified in JEE-Advance in 2014 as against 342 last year. From Kerala, a total of 475 candidates figured in the merit list this year against 295 last year.

Andhra Pradesh, from where the highest number of candidates (4,975) qualified this year, witnessed an increase in the number of students making it to the all-India merit list by 34.53 per cent. Last year, a total of 3,698 students had qualified from the state.

Tamil Nadu too witnessed an increase in the number of students qualifying this year. As many as 603 students from the state figured in the list of successful candidates, against 450 last year.

The IITs admitted 9,784 students, out of a total 27,152 candidates who figured in the all-India merit list, after three rounds of counselling. In its report, however, IIT Kharagpur, the convenor of JEE-Advance this year, did not give state-wise statistics on the number of students admitted to the 16 premier technical institutes.

"There has been an increase in the number of students appearing and qualifying in JEE-Advance from southern states over the years. It is difficult to comment on the exact reasons but, I think, it is the impact of the coaching institutes in Hyderabad," former director of IIT-Guwahati Gautam Barua told *Deccan Herald*.

According to the report, Bihar is second among states in terms of increase in the number of students qualifying this year. The state, from where 1,509 students qualified in JEE-Advance last year, saw 50 per cent increase in the successful candidates this year with 1,735 students making it to the merit list.

The IIT report also indicated a significant increase in the number of students qualifying from Gujarat and Maharashtra this year. As many as 672 students qualified from Gujarat against 450 last year, an increase of 59.61 per cent. From Maharashtra, as many as 2,313 qualified against 1,557 last year - a 48.55 per cent jump.

From Rajasthan, as many as 4,292 students qualified this year. The percentage increase in the number of successful students, however, remained at 18.20 per cent.

Last year, the state saw 3,631 students making it to the all-India merit list.

JEE-Advanced, 2014, was conducted under seven zonal IITs in 364 centres in 98 cities across the country, besides one centre in Dubai, on May 25. Over 1.19 lakh candidates took the test.

"There has been a significant increase in the number of candidates who qualified in JEE-Advanced, 2014. This increase is from 20,834 in 2013 to 27,152 in 2014," the report said.

DH News Service

Indian Express ND 10/09/2014 p-12

Not rocket science

Asking scientists to teach at schools and colleges is a promising first step. Now build on it

SCIENCE and Technology Minister Jitendra Singh's announcement that researchers at all publicly funded institutions will have to take a minimum of 12 hours of undergraduate- or school-level lectures per year in order to "serve society in a wider capacity" could be a good beginning. Even if by diktat, the move could help take scientific expertise beyond the confines of the laboratory and campus, and into classrooms. Accomplished scientists would bring instructional value to science, technology, engineering and mathematics (STEM) education. Greater opportunities for engagement with a practising scientist across settings and communities could potentially encourage the exploration of scientific research as a career path and as a striving towards knowledge.

But the success of such a programme would hinge on the details of its implementation. How, for instance, would the government ensure that scientists are available even — and especially — to distant schools in small towns and villages? Could it design the scheme in a manner that sees it equitably executed, such that schools in big cities do not corner all the available teaching resources? There is also the possibility that the 12-hour floor will, in practice, become a ceiling, with education and public outreach (EPO) efforts by the scientific community limited to government-mandated classroom interactions. Properly trained science teachers — Singh alluded to their absence while introducing the programme — are at least as important as classroom visits by scientists. Internationally, institutes like Nasa emphasise educator-training modules, offering workshops, curriculum design assistance and classroom materials in STEM subjects. Space flight budgets are mandated to include a "significant" EPO component. Premier Indian institutes could begin by making their websites more attractive to children and developing structured programmes that allow scientists to engage with students in formal and informal ways, such as by offering learning opportunities in unorthodox environments like planetariums and labs.

India's 600 million-strong young represent both a promise and a challenge. If properly trained, they could help it vault over emerging country competitors. Improving science education, and thereby attracting more young people to the sciences, is a win-win. The government's initiative is a promising first step. It needs to be built upon.

IIT-B student killed self: Cops

TNN | Sep 9, 2014, 11.03 PM IST

http://timesofindia.indiatimes.com/city/mumbai/IIT-B-student-killed-self-Cops/articleshow/42118522.cms

Mumbai: A police probe into the death of IIT-B student, Aniket Ambhore, 22, has revealed that he had committed suicide. Ambhore, who was depressed, fell from the sixth floor balcony of a hostel on the campus last Thursday.

"With no contradictory theory before us, it seems Ambhore committed suicide," said deputy commissioner of police Prashant Holkar (zone X). "We have recorded statements of Ambhore's roommate and a student who was standing in the opposite building and saw him fall. The roommate stated that Ambhore had spoken to his parents over the telephone before going off to sleep in his room. A few hours later, the roommate had left for the canteen."

While the police have not established the motive for Ambhore's drastic step, they believe his backlogs in subjects, along with depression, may have pushed him over the edge. Ambhore had several backlogs in the first and second years of his dual degree programme. He had returned to the campus after a 10-day break on Thursday. The Powai police, who have been conducting a detailed probe, also recorded his parents' statements.

IIT has a student-mentorship programme in place and counselors regularly visit hostels to interact with students. Students are mentored and monitored closely by faculty members during the academic rehabilitation programme, said the official. Ambhore was also put on the programme.

IITs to help promote sustainable rural development

The IITs will focus on improving sanitation and e-governance, and on promoting organic agriculture, alternative sources of energy and village entrepreneurship

http://www.livemint.com/Politics/19iE1VyJSNcku7F8rFWzSL/IITs-to-help-promote-sustainable-rural-development.html

New Delhi: The Indian Institutes of Technology (IITs) will work closely with the human resource development ministry and a few others to promote sustainable development in rural India, under a scheme called Unnat Bharat, the IITs said. Under the scheme, the premier technology institutes will focus on improving sanitation and e-governance, and on promoting organic agriculture, alternative sources of energy and village entrepreneurship. The IITs are joining hands with at least four ministries—human resource development, rural development, agriculture and science and technology. The IITs have met HRD minister Smriti Irani and will meet other ministry officials soon to finalize the road map. A national-level workshop has already been organized at IIT- Delhi to discuss the priority areas for the Unnat Bharat scheme. “We are trying to address the problem in rural India through technology push, helping grassroots organizations in innovating new products, and support rural entrepreneurs to develop neighbourhood solutions,” said V.K. Vijay, a professor at the Centre for Rural Development and Technology at IIT-Delhi and one of the programme coordinators for the scheme. This development comes on the heels of Prime Minister Narendra Modi’s Independence Day speech where he spoke about providing basic facilities to villages, urging parliamentarians to adopt and develop a model village in their constituencies. In the Union budget too, the National Democratic Alliance (NDA) government had made several provisions for promoting rural entrepreneurship. The budget has made a provision of Rs.200 crore to establish a technology centre network that will promote innovation and entrepreneurship in agri business, and another Rs.100 crore for a rural entrepreneurship scheme. Vijay said that all top technical institutions and agricultural universities will be asked to support the Unnat Bharat scheme. The IIT systems will be the nodal body and hand-hold other top institutions for the job. “Our students and teachers can spend time in developing products and technology that can be beneficial to villages,” said Vijay, adding that older IITs have rural technology action groups and these can be made more

active to make the mission a success. “We can have such departments in all the top technical institutions. Initially, 50 top institutions can join hands and then hundreds more can join in,” he said. India has 16 IITs and six new ones are being set up. Overall, in a couple of years, such rural development departments can function from over 300 institutions, said Vijay. He said that the areas which have been discussed include technology infusion in health and education delivery, providing alternate energy such as solar power to rural areas, and helping increase organic produce. The IITs will also help in developing technology for low-cost toilets, improving sanitation facilities by providing help to grassroot organizations, and helping e-governance initiatives. HRD ministry officials said that the ministry is quite optimistic about the move and after Modi’s 15 August speech, it has almost become a priority. “The ministry is mooting to have a cell on how to leverage educational institutes to help rural India. The (HRD) minister has already said that she supports opening rural development courses in top universities and technical colleges,” said a ministry official, requesting not to be named. Vijay said that joining hands with other ministries will also benefit the institutions in getting sponsored research projects. Such projects will provide a revenue boost to institutions, while benefiting rural communities. Gautam Barua, a former director of IIT-Guwahati, said that roping in more institutions to help rural people will be a good move and several government departments joining hands will give more weight to the mission. “But government has to think that how it can reward professors and students who will get involved in these projects. When there is a huge pressure on improving the global ranking of IITs, produce more research papers and better their citations, devoting a good amount of time for rural development needs motivation,” said Barua.

RESEARCH TIE-UPS WITH INDIAN INSTITUTES

Hindustan Times (Kolkata)

The University of Waikato with Jamia Millia Islamia University in New Delhi The University of Auckland with Anna University in Chennai The University of Auckland with Madurai Kamaraj University in Tamil Nadu The University of Otago with the University of Delhi The University of Auckland with the University of Calcutta University of Canterbury with the University of Delhi Victoria University of Wellington with Guru Nanak Dev University in Amritsar

IITs and IISc to offer joint free online courses under NPTEL project

http://www.prepsure.com/news/iits-and-iisc-to-offer-joint-free-online-courses-under-nptel-project/

The Indian Institutes of Technology (IITs) and the Indian Institute of Science, Bangalore (IISc Bangalore) will soon offer Massive Open Online Courses (MOOCs) as part of the National Program on Technology Enhanced Learning (NPTEL) project, funded by the Ministry of Human Resource Development (MHRD).

NPTEL project is a joint initiative of the IISc Bangalore and the seven old IITs – IIT Delhi, IIT Madras, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Bombay and IIT Roorkee.

NPTEL project originated after many deliberations between IITs, Indian Institutes of Management (IIMs) and Carnegie Mellon University (CMU). Under the project, five of the IITs and IISc Bangalore will create 100 web-based courses and 100 video courses. Duration of each course will be of 40 hours.

These online courses will be offered for free to students. They will focus Higher education, Professional education, Distance education and Continuous & Open Learning in that order of preference. NPTEL students will be able to opt for an optional certificate from the respective IIT by paying fee for the course. This certification will be based on students' scores in online assignments and a proctored examination.

NPTEL has recently launched the NPTEL Online Certification (NOC) portal which is backed up by Google the National Association of Software and Services Companies (NASSCOM), India.

Asian Age, ND 10/09/2014 P-6

Doom of science?

The theoretical physics genius Stephen Hawking has set the cat among the pigeons once again. He has warned that the "God particle", or Higgs boson, discovered in 2012, might destroy the universe if it becomes unstable. Science, of course, has already plenty to worry in an age that is proving cataclysmic in many ways. What his fellow scientists fear most is not that Hawking could be right but that the world cannot afford to test his dire prediction, His followers have been alarmed by Hawking's warnings before, for instance, on artificial intelligence, invading aliens and man-made viruses wiping out the human race. The greatest fear would, however, have to do with funding as Cassandra-like warnings may put off governments and the taxpaying public from further testing with the Large Hadron Collider at Cern. The LHC has already cost $13.5 billion to prove the existence of the "God particle" and is now to double its power.

The sobering thought is the universe may not end anytime soon as a particle accelerator about twice the size of Earth would have to be built if it were to touch the 100 billion giga-electron-volts (GEV) threshold being talked about before the Higgs field can be expected to destabilise. The positive is that there is new physics yet to be discovered, as a Cern theoretical physicist put it. Stretching research to further our knowledge of the creation of the universe has been man's greatest endeavour. This should not stop, although great minds are casting some doubts over man's ability to control experiments with science in its quest for the ultimate truth.

The Pioneer ND 10/09/2014
P-13

IIM CALCUTTA INNOVATION PARK

The Indian Institute of Management Calcutta (IIMC) has announced the formation of IIMC Innovation Park (IIP), a section 8 company in Eastern India, to incubate and accelerate the growth of start-ups in India. There will be two arms of the Innovation Park— the Incubation Unit and the Innovation Lab. The incubation unit would be for start-ups who would be mentored by IIMC alumni and faculty towards all aspects of establishing their ventures including development of business plan and funding from VCs and other sources. The Innovation Lab could be availed by established organisation for their R&D activities or as a knowledge centre, through a credit point scheme.

The programme requires businesses to go through a give-back system (through credit points) to the institute in form of student participation in projects, involvement in traineeship and placement, workshops, guest lectureship, consultancy and research opportunity for faculty etc.

The Pioneer ND 10/09/2014 P-13

Integrating employability into higher education

The education that the youth is getting in India isn't skilling them enough to make them employable. As a result 90 per cent of engineers, MBAs and ordinary graduates are struggling to find that first job that meets their aspiration. RAJIV MATHUR says the National Skills Policy is a step in the right direction

The Ministry of Human Resources Development (MHRD), Government of India states that on an average approximately 2.4 crore students enter into the higher education space every year after finishing their schooling. Out of that, just 40 lakhs proceed to get the post graduate degree or a doctorate degree after completing their graduation. This means that approximately 2 crore graduates are getting into workspace scouting for their first job every year. For the last 67 years, this educated lot continues to struggle to get their first job matching their aspirations.

There are many who passed out from prestigious schools in Delhi with Commerce and Mathematics as core subjects. They score decently but their marks is not good enough to fetch them admission in B Com (Honours) at an university of their choice. What will such students do? Where do they go? Most of them settle for the second best option which they find very challenging and not scoring. Some of these students are compelled to appear for the civil services examination. Only a fraction gets through the reputed services while a majority of the students find themselves a temporary internship for ₹8,000 pm in an MNC. This is a typical case of endless struggle in continuation. And this has been plaguing us for over a decade now.

The other problem prevalent in the country is when poor people aspire to do something big but do not have the resources to realise their dream. They feel lost in such a scenario.

Third and the most serious problem that the youth faces in this country is with the level of education and the standard of college degrees that is handed down to the students.

For the last 67 years, these and many similar problems are getting repeated and struggle of the youth is continuing to get the first job matching their aspirations. The clear reason is, as a nation we are focused on educating our youth more than what is required. But not attempting to skill them enough to get a job that meets their aspirations after completion of their studies. The education that the youth is getting in India isn't skilling them enough to make them employable. As a result 90 per cent of engineers or MBAs aren't employable—the plight of ordinary graduate is even higher.

On one side our youth is struggling to find a job matching their aspirations and on the other side Government estimates that by 2022, we will require 50 crore skilled youth if we have to sustain and grow our GDP at the current and planned rates.

Therefore in 2009, the Government came up with National Skills Policy and gave the task of skilling 35 crore youth out of 50 crores to the State Governments and the 17 Central Ministries and 15 crores to the private sector. In addition, it put the onus on industry to lay the National Occupational Standards (NOS) on which the Indian education system would re-align to make the youth skilled enough to be employable. Since then lot has moved forward.

The Government of India estimates that by 2022, we will require 50 crore skilled youth if we have to sustain and grow our GDP at the current and planned rates

NSDC AND SECTOR SKILL COUNCILS

National Skill Development Corporation (NSDC) came into existence not only to lead the private sector initiative in this direction but to also support the State Governments and Central Ministries in their skilling initiatives. NSDC has also formed 29 Sector Skill Councils (SSCs), which are mandated to form NOS. Through this, academia could integrate with academics, train and certify trainers and assessors who would then conduct the training and finally get the assessors from the industry to conduct the assessment and then to certify. This initiative is expected to make the students employable as they would be trained on curriculum built on NOS and assessed and certified by the SSC representing the industry. Some 800 entry level job roles across 20 sectors have NOS defined and more are being added every month.

The progress is now seen all over school system under the aegis of MHRD was the first one to adopt the NOS built by their respective SSC in 2012. The four sectors were Automotive, Retail, IT/ITes and Security. The pilot was initiated in 40 schools of Haryana. Those who participated in this pilot in 2012 are passing out this year.

All passouts who have decided not to take up higher education and enter the workspace are getting appropriately placed with the intervention and help of the SSCs. Out of 263 students desirous of placements, 150 are already placed and interviews for the rest are in progress. A segment which was hitherto exploited till recently, after being skilled is now being scrambled for offering jobs by the private sector companies likes of Marks and Spencer, Vishal Megamart, Maruti and Mahindra and many more, offering salary package from ₹7,500 to ₹14,000 per month.

QUALIFICATION FRAMEWORK

School segment is typically looking at job roles which are pegged at Level 4 of National Skills Qualification Framework (NSQF). This level points to a skilled worker. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.

From this year, Higher Education is also getting ready for this alignment with SSCs and adoption of the NOS. Consequently, Delhi University will be benefitting over 4 lakh students, Pune University benefitting over 7 lakh students both at graduation and post-graduation levels and Tamil Nadu Open University (TNOU) benefitting over 6 lakh students, have signed a MoU with NSDC to introduce skill based courses aligned to NOS and assessment and certification jointly with SSCs.

In this arrangement, the consortium of Sector Skill Council and NSDC Training Partners are taking the responsibility of skilling the students and making them employable by the time they finish their academics. In addition the consortium is also taking the responsibility of providing on-the-job-training in the industry while students are at study and assuring facilitating placement for 70% of students desirous of getting placed.

The participating Sector Skill Councils are Automotive, Healthcare, IT-ITeS, Telecom, Media and Entertainment, Gems and Jewellery and BFSI. More sectors are joining in as we speak. The job roles identified for higher education are typically pegged at NSQF Levels 4, 5 or 6 and have corresponding National Occupational Standards.

It is important to note that hitherto, till recently the Graduates and Post Graduates in India without any skilling were offered job roles by the industry typically pegged at Level 1 or 2 on NSQF. The Level 1 on NSQF points to unskilled person and Level 2 on NSQF points to unskilled person with 5 to 6 months of work experience.

NSDC solicits partnership with more Universities to make this silent revolution a big success.

The writer is principal, Standards and Quality Assurance, National Skill Development Corporation (NSDC).

Business Line, ND 10/09/2014

P-20

LITERATURE

Neel Mukherjee makes it to Booker shortlist

Indian-origin author among the final six

PRESS TRUST OF INDIA

London, September 9

Kolkata-born British author Neel Mukherjee's latest novel *The Lives of Others*, set in troubled Bengal of the 1960s and centres on a dysfunctional family, has been shortlisted for the prestigious Booker Prize 2014, in its debut as a global literary award.

Mukherjee, who studied at Oxford and Cambridge, was also the only Indian-origin author to be longlisted earlier this year, the first time the prestigious literary award opened up for anyone writing in English regardless of nationality. "We are delighted to announce our international shortlist. As the Man Booker Prize expands its borders, these six exceptional books take the reader on journeys around the world, between the UK, New York, Thailand, Italy, Calcutta and times past, present and future," said A C Grayling, chair of the 2014 judging panel.

"We had a lengthy debate to whittle the list down to these six. It is a strong, thought-provoking shortlist which demonstrates the wonderful depth and range of contemporary fiction in English," he added. Mukherjee, now a British citizen, has been selected for his second novel published in May this year. He reviews fiction for the *Times* and and his first novel, *A Life Apart* was a joint winner of the Vodafone-Crossword Award in India.

Times of India, ND 10/09/2014 P-21

Greenhouse gas levels breach new high

CO_2 Emissions Record Largest Annual Jump In 30 Yrs, Make Oceans More Acidic Than Ever: UN

Vishwa.Mohan@timesgroup.com

New Delhi: At a time when India witnessed the impact of climate change in the form of extreme weather events one after the other, the World Meteorological Organization (WMO) on Tuesday came out with an alarming disclosure. The level of greenhouse gases in the atmosphere reached a record high in 2013, propelled by a surge in levels of carbon dioxide, it said in a survey.

Though such findings cannot be country-specific, the increase of greenhouse gases may impact one and all at different points of time.

The shocking disclosure is part of the WMO's annual Greenhouse Gas Bulletin, released in Geneva, which also said the oceans that absorb these emissions have become more acidic than ever — yet another dangerous fact that has the potential to affect marine life.

AFP

RUNNING OUT OF TIME?

The Bulletin, released ahead of a UN climate summit, assumes significance as it may infuse a sense of urgency when world leaders assemble in New York on September 23 to give a political momentum to the efforts to deal with climate change. "In 2013, concentration of CO_2 in the atmosphere was 142% of the pre-industrial era (1750), and of methane and nitrous oxide 253% and 121% respectively (during the same period)," said the report.

These greenhouse gases have huge a warming effect on climate, which is responsible for extreme weather events in different parts of the world.

India, too, has been victim of such events. Be it the Uttarakhand disaster of June last year or the one which Jammu and Kashmir has been facing for the past week, such events could well remind how climate change can wreak havoc.

The report said: "The observations from WMO's Global Atmosphere Watch network showed that CO_2 levels increased more between 2012 and 2013 than during any other year since 1984. Preliminary data indicated that this was possibly related to reduced CO_2 uptake by the earth's biosphere in addition to the steadily increasing CO_2 emissions."

"We know without any doubt that our climate is changing and our weather is becoming more extreme due to human activities such as the burning of fossil fuels," said WMO secretary general Michel Jarraud. "The Greenhouse Gas Bulletin shows that, far from falling, the concentration of CO_2 in the atmosphere actually increased last year at the fastest rate for nearly 30 years. We must reverse this trend by cutting emissions of CO_2 and other greenhouse gases across the board," he said.

"We are running out of time... Past, present and future CO_2 emissions will have a cumulative impact on both global warming and ocean acidification. The laws of physics are non-negotiable," he said.

Business Line, ND 10/09/2014 P-12

HUMAN RESOURCE

What is your organisation's Pygmalion Quotient?

Great expectations lead to greater achievement, the Pygmalion Effect prophesies

C MAHALINGAM

Pygmalion is nothing new to those in management circles. Dr Sterling Livingston wrote a classic article titled Pygmalion in Management in the *Harvard Business Review* in 1998 and it was republished in January 2003. We actually measured the Pygmalion Quotient in an organisation where I managed the global HR function for eight years. As I took over, I was keen on assessing the maturity of the people management function in the company. People Management is how the line managers – from first-line all the way up to senior managers – manage their teams. The higher the maturity of people management in an organisation, the greater the chance of all key people-related indicators such as ability to attract talent, retain and engage them, and get them to deliver their best.

The Pygmalion Effect demonstrates the following:

What managers expect of their subordinates and the way they treat them largely determine their performance and career prospects.

A unique characteristic of superior managers is the ability to set high performance expectations that subordinates fulfil.

Less effective managers fail to develop similar expectations and as a consequence, the productivity of their subordinates suffers.

Subordinates, more often than not, appear to do what they believe they are expected to do.

Self-fulfilling prophecy

In other words, the Pygmalion Effect is a self-fulfilling prophecy. When managers expect superior performance and create necessary conditions, the direct reports measure up and deliver superior performance. Dr Rosenthal, who did early experiments and established the Pygmalion Effect, mentioned four supporting factors that leaders do to make it come alive. They are: (a) managers create a warmer climate for their subordinates; (b) provide useful inputs to them; (c) provide the opportunity to learn and perform and finally (d) provide differentiated feedback. Together, doing these four things defines the supporting environment for the juniors to deliver their best and fulfil the performance expectations from their managers.

Measuring the Pygmalion Quotient

Establishing a Pygmalion culture is a function of getting managers across levels and functions in the organisation to deliver superior performance by bringing the self-fulfilling prophecy alive. Measuring PQ is a first step to understand how managers as a community behave like Pygmalion in an organisation. This is done through intensive discussions and interviews with managers and the team members they supervise. With questions like "What is your approach to developing your people?"; "How do you set performance goals for your people?" "What do you focus on when you do performance reviews?"; you go about assessing your managers' style and commitment to playing Pygmalion. But this is only half the story. The exercise is complete only when you speak to the direct reports of your managers and ask them similar questions. The responses of team members are even more important than the responses of the managers. However, gaining insight from discussions with both managers and the managed will help build a holistic perspective on the Pygmalion quotient of the company.

SHUTTERSTOCK.COM

Being, knowing and doing

There are three dimensions to measuring the PQ. They may be described as the being, the knowing and the doing. From a manager's viewpoint, being represents a sense of oneself as a potential Pygmalion; knowing represents the appreciation of what being a Pygmalion can do to elevate the juniors' performance; and doing represents what actions does the manager really take for demonstrating the Pygmalion in him or her! Effectively, playing Pygmalion requires an integrated self with all three aspects coming fully alive.

Establishing a road map

This is the first step: knowing where your organisation stands. Once you had done the diagnosis in terms of what percentage of your managers play Pygmalion (knowingly or otherwise), you set out on establishing a robust people management maturity road map for your organisation. While establishing the roadmap and gaining the approval of the management team itself may not take more than a few weeks, making sure the roadmap is a complete one is critical to institutionalising the culture of people management in the organisation. The road map has to be prepared and owned by HR, but in effect, it is something that the CEO and senior management endorse and value. At the end of the day, remember the wisdom from Gallup that people join corporations, but leave managers! So, how on earth can an organisation get and keep great talent if they do not raise the bar for people management? When the bucket has huge holes in people management, pouring great people into it is of no avail.

(C Mahalingam is an Executive Coach and HR Advisor. He is also a visiting professor at several IIMs)

The Pioneer ND 10/09/2014 P-1

Solar power can make saltwater potable!

PTI ■ WASHINGTON

A desalination technology powered by solar panels could provide enough clean, palatable drinking water to meet the needs of India's water-deficient villages, MIT scientists say.

Sixty per cent of India is underlain by salty water — and much of that area is not served by an electric grid that could run conventional reverse-osmosis desalination plants.

An analysis by Massachusetts Institute of Technology (MIT) researchers Natasha Wright and Amos Winter shows that a different desalination technology called electrodialysis, powered by solar panels, could provide enough clean, palatable drinking water to supply the needs of a typical village.

Finding optimal solutions to problems such as saline groundwater involves "detective work to understand the full set of constraints imposed by the market," said Winter.

After weeks of field research in India, and reviews of various established technologies, Winter said, "When we put all these pieces of the puzzle together, it pointed very strongly to electrodialysis" — which is not what is commonly used in developing nations.

The factors that point to the choice of electrodialysis in India include both relatively low levels of salinity — ranging from 500 to 3,000 milligrammes per litre, compared with seawater at about 35,000 mg/L — as well as the region's lack of electrical power.

Such moderately salty water is not directly toxic, but it can have long-term effects on health, and its unpleasant taste can cause people to turn to other, dirtier water sources.

This new technology could turn undrinkable saltwater into enough clean, palatable drinking water

"It's a big issue in the water-supply community," Winter said. By pairing village-scale electrodialysis systems with a simple set of solar panels and a battery system to store the produced energy, an economically viable and culturally acceptable system could supply enough water to meet the needs of a village of 2,000 to 5,000 people, researchers concluded.

They estimate that deployment of such systems would double the area of India in which groundwater — which is inherently safer, in terms of pathogen loads, than surface water - could provide acceptable drinking water.

While many homes in India currently use individual, home-based filtration systems to treat their water, Wright and Winter concluded that village-scale systems would be more effective - both because fewer people would be left out of access to clean water, and because home-based systems are much harder to monitor to ensure effective water treatment.

The study appears in the journal *Desalination*. Most organisations working to improve clean-water access focus their attention on controlling known pathogens and toxins such as arsenic, Wright said.

But her analysis showed the importance of "what the water tastes like, smells like, and looks like."

Continued on Page 4

Solar power can make...

From Page 1

Even if the water is technically safe to drink, that doesn't solve the problem if people refuse to drink it because of the unpleasant salty taste, she said.

Electrodialysis works by passing a stream of water between two electrodes with opposite charges. Because the salt dissolved in water consists of positive and negative ions, the electrodes pull the ions out of the water, leaving fresher water at the centre of the flow, Winter said.

A series of membranes separate the freshwater stream from increasingly salty ones. Both electrodialysis and reverse osmosis require the use of membranes, but those in an electrodialysis system are exposed to lower pressures and can be cleared of salt buildup simply by reversing the electrical polarity.

That means the expensive membranes should last much longer and require less maintenance, Winter said. In addition, electrodialysis systems recover a much higher percentage of the water - more than 90 per cent, compared with about 40 to 60 per cent from reverse-osmosis systems, a big advantage in areas where water is scarce.

Having carried out this analysis, Wright and Winter plan to put together a working prototype for field evaluations in India. Researchers said while this approach was initially conceived for village-scale, self-contained systems, the same technology could also be useful for applications such as disaster relief, and for military use in remote locations.

Business Line, ND 10/09/2014 P-20

FUTURE SHOCK

Genetic-level body upgrades to create new species of human beings

Expensive human enhancements will lead to a society more unequal than ever

IAN SAMPLE

Homo sapiens were not always so special. In the ancient past, other human forms lived beside us: the Neanderthals in Eurasia, small, hobbit-like humans in Indonesia, the mysterious Denisovans in the Ural Mountains.

But our time alone may be nearing its end. Through the power of technology, humans are set to take on the role of Intelligent Designer. We can upgrade ourselves and surmount evolution. Ultimately, we can become entirely new beings that set the stage for a post human future.

Brave new world

The scenario has played out for decades in science fiction but the prospect is raised more seriously by Yuval Noah Harari, an Israeli historian, in his latest book, *Sapiens*. In it he sees trouble ahead. The latest human enhancements will be accessible only to the rich, leading to a 21st-century society more unequal than any that came before.

Made to order

The revolution Harari has in mind is borne of engineering and exploits mechanical, electronic, chemical and genetic progress. In place of treatments that correct biological deficits, like failing hearts, poor hearing and weak eyesight, will be procedures that improve on natural performance, making the fortunate recipients biologically better than the rest.

"In the 20th century, the main task of medicine was to bring everybody to a certain level of health and capability. It was by definition an egalitarian aim," said.

"In the 21st century medicine is moving onwards and trying to surpass the norm, to help people live longer, to have stronger memories, to have better control of their emotions. But upgrading like that is not an egalitarian project, it's an elitist project. No matter what norm you reach, there is always another upgrade which is possible."

The haves and have-nots are far from new. Cochlear implants which wire directly into the auditory nervous system have transformed the lives of a minority of deaf people. But they cost £40,000 apiece. Similarly, genetic tests that radically change patient care are beyond the means of many individuals and countries' healthcare systems.

Harari argues that as science progresses the upgrades that become available will increasingly widen the gap between rich and poor. Research on implantable devices called brain-computer interfaces (BCIs) is in trials to help disabled people move their defunct limbs or robotic prosthetics.

More advanced devices could link people's brains directly to the internet, giving them vast and faithful memory storage, and seamless access to information, even if that does include endless footage of cats in hats.

Ponder worthy

Work is ongoing into BCIs that connect many brains at once, allowing animals to cooperate by accessing each others' brain power, work which raises deep questions about the future meaning of identity. Genetic engineering will be more disruptive still. A new genome editing procedure called Crispr has given scientists their first real hope of making safe, precise changes to the human genome. They have already used it to correct cells with genetic faults that cause cataracts and cystic fibrosis. Similar therapies might allow improvements to human performance.

Western history has made many of today's researchers flinch at studies into the genetic basis of intelligence. But the Beijing Genomics Institute, the world's largest genomics research centre, has taken on the job. If the project bears fruit, it might drive attempts to boost human intelligence by genetically modifying embryos.

George Church, a geneticist at Harvard University, suggests another radical possibility. He has developed tools that can scramble the genetic code leaving it functional but unrecognisable to invading viruses. His first goal is to engineer a bacterium that is resistant to viral infection. But he does not dismiss the possibility of changing human DNA too — leading to a biologically new kind of human.

"In the 21st century, there is a real possibility of creating biological castes, with real biological differences between rich and poor," said Harari. "The end result could be speciation. We're used to being the only human species around, but there is no law of nature that says there can only be one species of human. With this kind of upgrading treatment we could have, in the not 'too distant future, more than one human species on Earth again."

Anders Sandberg, a researcher at the Future of Humanity Institute at the Oxford Martin School, said that while technology might drive an evolutionary split in humankind, the divide would not separate rich and poor. THE GUARDIAN