

सत्यमेव जयते

DEPARTMENT OF  
HIGHER EDUCATION  
MHRD  
GOVERNMENT OF INDIA

# द न्यूजलैटर THE NEWSLETTER ON HIGHER EDUCATION

ISSUE **06**  
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## THIS ISSUE

### ■ National Mission on Education through Information and Communication Technology

Covering this:

1. Connectivity
2. Content Creation
3. Aakash Version 1 Specifications
4. Roadmap

### ■ Education Development through ICT in India

Covering this:

Early initiatives taken in education:

1. Gyandarshan Bouquet
2. Educational Satellite (EDUSAT)
3. Content generation
4. Provision of e-books, e-journals.

## SECTIONS

- Campus Notes
- Exchange of Ideas
- Vichaar Vimarsh
- Appointments / Retirements



*“Failure comes only when we forget our ideals, objectives and principles.”*

- Pt. Jawahar Lal Nehru, First Prime Minister of Independent India.

*Shri Kapil Sibal, Minister of HRD and Dr (Smt.) D. Purandeswari, Minister of State of HRD, launching the “Aakash Low Cost Access Device (LCAD)”, in New Delhi on October 5, 2011.*

## Launch of 'Aakash' Heralds New Era In Technology-Based Learning

Shri Kapil Sibal, Hon'ble Minister of HRD launched 'Aakash', a Low Cost Access-cum-computing Device on October 5th, 2011. On this occasion, the device was also distributed to 500 students drawn from various institutions of higher learning from across India. Shri Sibal, while dedicating this device to the students of India and the world, emphasized that Aakash will be a major tool in the fight to eliminate digital illiteracy.

The Minister invited all sections of society including academics and industry to contribute their efforts in the campaign to enhance the capability of Aakash and lower the cost of the device. The Minister also appreciated the efforts of the team that had conceptualized and productionized this device.

### Background

The three key objectives of the Higher Education Policy of the Government of India are:-

- Access
- Equity
- Quality

In order to ensure that the Gross Enrolment Ratio (GER) continues to rise, the Government of India sanctioned the National Mission on Education through ICT (NMEICT).

The National Mission on Education through Information and Communication Technology (NME-ICT) was launched by the Ministry of HRD, Govt. of India in February 2009 with one of the largest outlays on education over a five-year period anywhere in the world, particularly when it is remembered that the budget amount did not include the expenditure being made in the normal course by the Central and State governments.

Ever since its launch, the NMEICT has been instrumental in bringing about a “technology-based” revolution in the sphere of Higher Education. Resting on the two principles - CONNECTIVITY & CONTENT-CREATION - the Mission goes forward to ensure easy access to quality education for every student in the country. To fulfill its aim to improve techniques of propagation of education, the NMEICT makes use of tools such as software packages, Sci-labs, and videos.

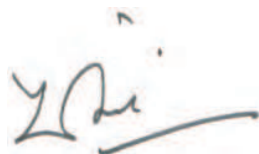
Let me begin this issue with a very Happy New Year to all the readers. You all know that education plays a foundational role in the development of a nation by equipping its youth with the power to dream for a bigger and better future. However, when this opportunity is missed, the future becomes dark, not only for the youth but for the whole society. Distance Education provides a window within this darkness so that the light of education continues to guide the future.

With new developments in technology, the distance education has come to play an improved role in helping thousands of Indian students continue their education from within their confines and attain, not just a degree or diploma, but also a right to a respectable livelihood.

In the present issue of The Newsletter on Higher Education, we have discussed in detail the various aspects of Technology Enabled Learning in Distance Education. One of its major features is the National Mission on Education through Information and Communication Technology (NMEICT). Besides allowing the teachers to propagate high-end data to students sitting far away from the classrooms, this endeavour is also instrumental in building confidence among the students to carry on their studies of difficult subjects with complete ease.

The "Akaash" tablet, an ambitious project for the country, was launched in October in India and presented in front of the world leaders a few weeks later at the UNESCO General Conference. It has generated positive response and sufficient interest among the students as well as the general public. We have tried to capture the full report on the development for the benefit of readers.

Besides, there is the usual round-up of collaborations, meetings, and general developments, which shall give the readers an idea of the goings-on of the past quarter. As always, your feedback is welcome in pursuit of improving this Newsletter and your suggestions are also solicited regarding what should be covered in the coming issues.



(Vijay P. Goel)

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### Discussion Forum

The next issue will focus on "Technical Education." Readers are requested to send in feedback, in the form of comments, suggestions and ideas on [editor.edu@nic.in](mailto:editor.edu@nic.in)

## National Mission on Education through Information and Communication Technology

The objective of this Mission is to convert India's demographic advantage into a knowledge powerhouse by nurturing and honing the knowledge and skills of our higher education student and faculty population of around 22 million.

"NMEICT is a Mission mode project launched by the Ministry of HRD, Govt. of India on 3rd February 2009. The Mission is funded as a Centrally Sponsored Scheme under the current 5 Year Plan (ending on 31st March 2012).

The objective of this Mission is to leverage the potential of ICT in providing high-quality, personalized, and interactive knowledge modules over the internet in a any-time, any-where mode. The Mission provides funding for both content generation as well as connectivity to Colleges and Universities all over India." The National Mission on Education comprises 48 different components structured broadly around building CONTENT, enabling ACCESS and developing LOW COST ACCESS cum COMPUTING DEVICES.

The diagram below shows the three major components of the Mission:

### 1. Connectivity:

It is expected that 416 Universities and 20,000 colleges all over India will be connected under this Mission. About 60% of the total Mission funding has been reserved for this.

Each University will get 1Gbps connectivity (via NKN). Each University will also get a LAN of about 400 nodes under NMEICT. Each College will get connectivity of 20 x 512 kbps which they can club together to make 10Mbps.

The Mission pays for fiber connectivity for each University to connect to the nearest NKN node. The Mission has placed a consolidated order for connecting all Universities and Colleges to BSNL and about 80% of the Universities and Colleges have been connected already.

### 2. Content Creation

The Mission has proposed 18 different line items for content creation. All content that is created under this Mission needs to meet the following criteria:

- It should be related to education delivery.
- It should involve faculty from different institutions
- All IP (Intellectual Property) created under projects funded by this Mission will vest with MHRD
- All content should be created using open-source software.
- All content created under this Mission is for open access by all and cannot be charged for in any way

### Aakash - Low Cost Access cum Computing Device

#### Why?

Around 5 years ago the government was approached by an organization with a proposal that the Government of India should purchase large quantities of a device at an offer price of US\$ 100 per device, which on further discussions was found to be over US\$ 150 per device. The device, while it was billed as a "laptop" was found to have limited functionality and was targeted at school children. Since requirements in India were of very large numbers, MHRD felt that the device should be ideally priced at under US\$50/device with the ultimate goal of reaching \$10 per device much later. Their response was that it was impossible to produce a device at such a low cost.

This was the genesis of the program that was then set up by MHRD under this mission with the objective of designing and productionising a functional computing device at



A VIEW runs on multiple display and multiple devices



# Technology Enabled Learning in Distance Education

an ex-factory cost that was around US\$ 35/device. A number of small teams consisting of hardware and software designers and persons with experience of commercial issues and negotiation were nucleated under the Mission to achieve the goal.

## What?

The core team of experts decided to create specifications for a made-for-purpose device, meant especially for educational purposes. Since the Mission (NMEICT) is meant for higher education, this device has all the capabilities required by a student, including wifi, streaming video (to play NPTEL lectures), e-book reader etc. Various open-source educational software packages like Sci-lab etc will also be ported on to this device. Using this device, students can also access all the content created under the other components of NMEICT like Virtual labs, N-LIST etc.

## How?

MHRD started its efforts in that direction and requested big players in VLSI design to work with the Ministry so as to have a true system on chip. In spite of a lot of talk about Corporate Social Responsibility there was lukewarm response to the idea from big names. MHRD then had to chose a path of going it alone. What was done was to discuss the idea with a group of Professors / experts at IISc, Bangalore, IIT Kanpur, IIT Kharagpur, IIT Madras and IIT Bombay before moving in this direction. The teams began working on various designs and came out with different prototype devices. The challenge, however, was to design a device that could be productionised at an ex-factory cost that was around US\$ 35. Initially, the team's efforts were met with skepticism and scorn. However, as various prototypes appeared, not only did the confidence of the team members increase but also as word spread about this initiative., we noticed that internationally and in India, tablet devices started appearing at sub-US\$100 prices.



To provide freedom to explore beyond the laid down set of instructions without the risk of damaging costly equipment.

Thus, this initiative of the Mission has resulted not only in an ultra low cost device for the students in India, but has also created a new market niche.

While it is correct that it was a challenging price point, the cost has been achieved by using the best and most cost-efficient hardware that meets our requirements. Cost efficiencies have been achieved through innovation and negotiation, both.

There was already a lot of chatter on the Internet about this device, much of it negative. To ensure complete transparency and a level playing-field, the Mission decided to task one of the IITs (IIT Rajasthan at Jodhpur) with the job of procuring and testing these devices based on the design and specifications that the Mission's team had finalized.

IIT Rajasthan followed an open tender process. A three-step process was followed to evaluate the bids that were received. First, a committee scanned all bids to check their eligibility based on the conditions specified in the tender. Eligible bids were then evaluated by a technical evaluation committee comprising of eminent academics and industry experts. Bids that were found technically suitable were then evaluated by a financial evaluation committee which then declared the lowest bidder. Following set government norms, a further negotiation was then held with the lowest bidder and a further discount obtained from them.

On 22nd July, 2010 HRM had unveiled a device that was expected to cost "around US\$ 35". The lowest bidder quoted an ex-factory price of US\$ 37.98 which was close to the cost mentioned by HRM. This cost that comprised of cost of components and material as well as manufacturing expenses. The final landed price of \$49.98/unit (which translated to INR 2276 at the exchange rate at the time of the order) included taxes, levies, and charges like freight and insurance, servicing and documentation etc. The landed price also includes one-year free replacement warranty from the manufacturer.

It needs to be mentioned that this price does not include any subsidy from the Government and is a price that has been arrived at following a commercial tender process.

This is a unique device and is a first of its kind in the world. There is no other device that offers so much functionality at such a low cost.

# Technology Enabled Learning in Distance Education

The development of this device has been done in India. There has been some criticism that this is a made-in-China device. We have available a video that shows these devices being manufactured in a plant at Hyderabad.

The Aakash tablet comprises of many hundreds of components sourced from around the world. The major countries of component supply are as follows:

- South Korea 39%
- China 24%
- United States 16%
- India 16%
- Taiwan 5%

This unique device is meant for students across India. Using this device, and the connectivity also provided under this Mission, learners will be able to access all the thousands of items of content available on the Sakshat portal and other educational web-sites.

MHRD has brought in a paradigm shift in the educational computing environment. The real paradigm shift is in seeking education delivery in any environment at any time without much dependence on regular power supply. The student does not get bound to a brick and mortar classroom, but can access world-class lectures and educational content on this device, in anytime, anywhere mode even in the most remote corners of this country.

Learners, therefore, are no longer hampered by the lack of infrastructure or facilities but have the entire power of ICT available to them for educational purposes. The device will be distributed to students through the institutions at which they are studying.

The independent team approach of MHRD has also paid rich dividends as the success of some of the teams could be interwoven to overcome bottlenecks of other teams.

## Roadmap

This current phase was a pilot to procure 100,000 devices. This pilot helped in sorting out the production related issues. These devices are now being distributed to students all over the country so that they can be extensively tested in various climatic and usage conditions. Funds are available for procurement of 10000,000 Low Cost Access-cum-Computing Devices.

After the testing and feedback phase is over, orders can be placed for the next lot of 10000,000 LCADs.

To achieve this, the team of experts working on this project would be broad-based. The production capacities of Indian manufacturers would also have to be substantially expanded to meet production requirements of a few million devices within a six-month time frame.

Broadly speaking, future efforts will move in two directions - to achieve the same functionality at a lower cost and to achieve added capabilities at the same cost.

MHRD invites collaboration, ideas and inventions from the community of academics and experts and inventors to achieve the cherished goals.

MHRD also encourages system integrators and device manufacturers to establish their facilities in India so that in the long run a suitable eco-system gets developed in the country to attempt even more ambitious goals.

## Aakash Version 1 Specifications

### Hardware:

- Processor: 366 Mhz
- HD Video co-processor with Graphics accelerator
- Memory (RAM): 256MB RAM / Storage (Internal): 2GB Flash
- Storage (External): 2GB (upto 32GB Supported)
- Peripherals - 2 Nos. of USB 2.0 ports
- Audio out: 3.5mm jack / Audio in: 3.5mm jack
- Display and Resolution: 7" LCD Resistive touch-screen display with 800x480 pixel resolution
- Input Devices: Resistive touch screen with virtual keyboard
- Connectivity and Networking: WiFi IEEE 802.11 a/b/g
- Power and Battery: 2100 mAh (Up to 180 minutes on battery.) AC adapter 200-240 volt range.

### Software:

- OS: Android 2.2
- Document Rendering
- Supported Document formats: DOC, DOCX, PPT, PPTX, XLS, XLSX, ODT, ODP
- PDF viewer, Text editor
- Multimedia and Image Display
- Image viewer supported formats: PNG, JPG, BMP and GIF
- Supported audio formats: MP3, AAC, AC3, WAV, WMA
- Supported video formats: MPEG2, MPEG4, AVI, FLV
- Communication and Internet
- Web browser - Standards Compliance: xHTML 1.1 compliant, JavaScript 1.8 compliant
- Separate application for online YouTube video
- Safety and other standards compliance
- CE certification / RoHS certification

## EDUCATIONAL DEVELOPMENT THROUGH ICT IN INDIA

### EARLY ICT INITIATIVES TAKEN IN EDUCATION:

With the operationalisation of first INSAT Satellite, the MHRD in 1984 engaged the UGC and the NCERT in setting up Media Centres (EMRC'S & AVRC'S) to generate educational television content. The first such regular nationwide telecast of educational programmes in Higher Education, from UGC, started on August 15th, 1984, for one hour a day and was shown through all terrestrial Doordarshan TV transmitters. Later on the duration of such telecast was extended to two hours a day. Similarly the NCERT also originated and delivered the suitable school education programmes through Doordarshan.

### GYANDARSHAN BOUQUET

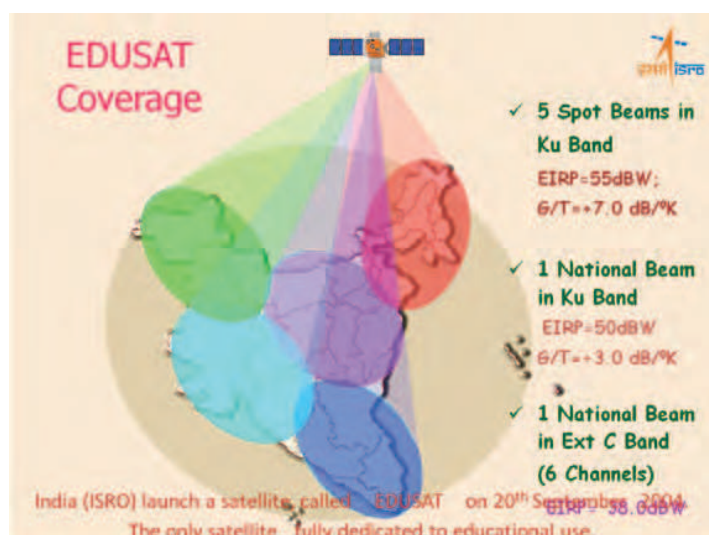
To further strengthen the ICT programme in education, the MHRD on January 26th, 2000 set up Gyandarshan Network, consisting of satellite Earth Station at IGNOU, and Gyandarshan-I delivered, on 24X7 basis, educational programmes which were contributed by a number of educational institutions such as CEC/UGC, IGNOU, NCERT, IIT's, etc. Further, Aklavya channel, dedicated to Engineering education, was launched by IIT institutions and added to Gyandarshan bouquet on January 26th, 2002. CEC-UGC launched an exclusive Satellite Higher Education Channel on 24X7 basis, on 26th January, 2004, and is named as "Vyas channel. Some of these channels including CEC Channel were also launched through DTH Platform, DD Plus of Doordarshan, free to Air and is also telecast by private DTH operators such as Dish TV since March 9, 2009.

The IITs have produced about 5000 Videos & Web based coeres under NPTEL-I programme. CEC/UGC and its Media Centres have also produced, as on date, more than 18,000 programmes in a number of UG and PG subjects.

### EDUCATIONAL SATELLITE (EDUSAT)

EDUSAT, a GSAT-3 fully devoted to education was launched by ISRO on September 20th, 2004 at a 74°E parking slot. The satellite has one National Beam in Ku Band (14/11 GHz TX/Rx), five spot beams in Ku Band for Regional transmission and six channels in extended C-band. The satellite has been designed to meet the current requirements of training students and teachers in the country, in unicast, multicast

and broadcast mode, using Multimedia, data-casting, video conferencing, video streaming etc. EDUSAT is based on Digital Video Broadcast using Return Channels via Satellite (DVB-RCS) (using S1 transmission) in Ku Band. Forward Link can serve a bandwidth of about 45 Mbps. Further, with the help of Multimedia Home Platform of a Satellite Interface Terminal (SIT) a Return Link (link from SIT to Hub/Sub-Hub) can be established. Return Link (RL) can simultaneously be used by tens of thousands of users for establishing a true two way exchange of Multimedia services (e.g., Video, data, fax, Broadband Intranet and audio link). A two way communication between SIT terminals, SIT and Hub/Sub Hub can thus be established from home, office or institutions. Therefore this has proved to be a perfect network, suitable for e-learning in a diverse country like India.



### EDUSAT User Networks National Beam

As on date ISRO has established the following Educational Networks with a cumulative installation of about 800 SIT's and 1400 'Receive only Terminals' (RoT's) N/w's.

1. Consortium for Edu., Communication (CEC)
2. Indira Gandhi National Open University (IGNOU)
3. All India Council for Technical Education (AICTE)
4. Central Institute of Education Technology (CIET)
5. Vigyan Prasar (DST)
6. IDSP New Delhi
7. RGPEEE, Jabalpur
8. INDO-US (Coimbatore)
9. RCI New Delhi



# Technology Enabled Learning in Distance Education

A Network of 101 SIT & 70 RoT has been installed at Institutions of HE across the country by the CEC-UGC EduSat Network and regular educational live programmes by experts on different subjects with live Video Conferencing (VC) sessions from students from different parts of the country is taking place on this network from September 5, 2005. CEC has further been provided with Satellite Management Network of EduSat network, with which CEC can set Migratory Teaching End's in few seconds and the Teaching End transmission is shifted from CEC to any of the 101 institutions having SIT networks and all the Return Path traffic, i.e. VC question answer session from students gets automatically shifted to this station. EDUSAT-based education from IGNOU is also available through more than 134 SIT terminals.



## NATIONAL MISSION ON EDUCATION THROUGH INFORMATION COMMUNICATION TECHNOLOGY (NME-ICT)

Govt. of India on January 2, 2009 approved a massive programme of utilising ICT for spread of e-learning in the country, under the banner "National Mission on Education through ICT" (NME-ICT). The Mission was launched on February 3, 2009 by the Hon'ble HRM at Tirupati, wherein all the Vice-chancellors, Directors of premier institutions and other dignities were invited to attend the function.

### CONTENT GENERATION

The Mission aims to generate e-content, video programmes and content, suitably seen on Net, DTH, IPTV, etc. The content is being generated for complete Under Graduate/Post Graduate subjects in hundreds of courses that are currently taught in colleges and universities throughout the country. High quality e-content production

in almost every subject /course / discipline, for the target groups has already been initiated by hundreds of colleges, universities, institutions of higher learning across the Country.

Development of e-Content by IIT's titled, National Programme of Technology enhanced Learning (NPTEL) Phase II and III will be part of the content generation activity. NPTEL created about 120 courses on Web+ and 120 Video Courses in Phase-I in a number of engineering disciplines. Further NPTEL during Phase II by March 31, 2012 shall produce about 1020 Video courses for 24 disciplines of engineers UG, PG & Management.

CEC and 17 of its Media Centres are also developing e-Content in 19 and 68 subjects of UG in phase I and II respectively in four quadrants.

UGC is also set to produce Post Grad., e-Content in 77 Subjects. TERI University is developing PG Programme in environmental sciences.

### PROVISION OF E-BOOKS, E-JOURNALS

The Mission is further making available: (a) textbooks, reference books, research journals, learning material and software that may be used for educational and training purpose etc., (b) high quality reading material, reference material, research papers, educational software, for use by Indian learners, free of cost, in digitized form.

Right now for College students 74,000 e-books from 297 publishers, 3700 e-Journals are available to 1,08,729 students associated to 1,512 Institutions. Similarly for University students more than 7,500 e-Journals to students associated to 297 Institutions are available from INFLIBNET & IIT Delhi

Full text e-Thesis numbering 2224 is also available on INFLIBNET network.

### DEVELOPMENT OF ACCESS DEVICES

The Honorable Human Resource & Development (HRD) launched 'AAKASH' the world's Lowest Cost, Access Device on October 5, 2011 at Vigyan Bhavan, New Delhi for the benefit of the learners of this country. The Aakash is low power consuming access device/ Tablet based on Android 2.2 and field trials of 7" LCAD numbering 10, 000 pieces and costing about Rs. 2250/- is right now taking place.

# Technology Enabled Learning in Distance Education

Provision of 220 million Aakash devices in 22000 Institutions of Higher Learning at 50% subsidy shall be made available to students of Higher education.

## OTHER DEVELOPMENTAL PROJECTS

A number of developmental projects being developed by a number of Educational Institutions are underway under NME-ICT projects such as: Development of Language Converter and Translation Tool Kit, Creation of Bi-lingual Corpora and Development of Machine Aided Translation Engines, English to Tamil/ Hindi, Development of Vocational Education modules and use of Haptic devices for education and training, Develop software interfaces for Linear Haptic device - Hacksaw, File, Table saw, Planar, Jigsaw, Band-saw, Development of Low Cost mobile Robots- Robotica for Education, Village community network technology development and pilot out plan for low cost opportunity communication network for rural areas of India, Library Automation & Resource Sharing network, Development of an Indian sign language recognition system for hearing impaired students of India, E Yantra: robot enhanced teaching of subjects in Engineering college, etc.

## TALK TO A TEACHER

Interactivity and problem solving approach would be addressed through "Talk to a Teacher" component, where availability of teachers to take the questions of learners shall be ensured appropriately.

## CONNECTIVITY (Net)

2000 nodes for 1 Gbps connectivity (equivalent to 2000 number of 512 kbps VPN endpoint) at each of the 100 Central Institutions / premier institutions to be connected through BSNL Internet + VPN Plan.

15-20 nodes of 10 Mbps connectivity at each of the 22,000 Institutions of Higher Learning connected through BSNL Internet + VPN Plan.

As on date, 409 Universities and 13000 Colleges have been connected.

## DEVELOPMENT & REALISATION of VIRTUAL LABORATORIES

Tools for setting up of Virtual labs for quality enhancement are being developed, so that the learners

in distance education system and remotely located & backward areas can reap the benefits of quality and relevant education, through ICT mode. More than 880 Virtual Lab experiments in first phase are being designed, comprising of a user-friendly graphical front-end, working in synchronization with a backend, consisting of a simulation-engine running on a server or actual measurement data or a real experiment.

Virtual Labs in subjects such as Electronics & Communication, Electrical Engg., Chemical Sciences, Mechanical Engg., Civil Engg., Physical Sciences, Biotechnology, Computer Science and Engg, Chemical Engg. will provide students results of an experiment by:

- I) Remote triggered experiments
- II) Measurement-based
- III) Modeling / simulations.

Besides, development of software controlled hardware programming for robotics & other crucial areas has been taken up by a number of institutions.

## DEVELOPMENT OF ENTERPRISE RECURSE PACKAGE

The following software is being developed by a group of institutions headed by IIT Kanpur: Learning Management System (LMS), Student behaviour tracking and Visualization, Time table management, Library management system, Asset Management & tracking system with APIs to interface tracking devices, Project management system, Grant Management System, Localisation into regional languages, Cloud API, Security framework, Brihaspati-4, Service upgradation to Chaupal-based storage cloud, Upgrade to OpenID based authentication and authorization, Online academic registration system, Student portfolio management system, Parent notification and interaction system, Payroll, taxation and accounting system, BrihasptiSync - live lecture delivery system, Brihaspati websites - Content management system, etc.

## CONNECTIVITY DTH

Beside Net, there is a provision under NME-ICT to disseminate educational material to digitally deprived students throughout the country: via DTH and EDUSAT. It is envisaged to have one EduSAT Satellite Interactive Terminal (SIT) at each of the 22,000 Institutions of Higher Learning.



# Technology Enabled Learning in Distance Education

Provision of 1000 DTH Channels for beaming various educational programmes including IPTv has been planned under the Mission. This would enable availability of one DTH channel for every subject for every class and in many of the regional Languages. It is envisaged to have about 40 - 50 transponders from Indian satellites.

## WHAT SHOULD BE THE PRODUCTION & DELIVERY METHODOLOGY Of e-EDUCATION IN INDIA

(Some of the views expressed below are the views expressed by the author)

### TEACHING METHODOLOGY

India has acute shortage of Teachers, to have Equity and Access; it is therefore felt that there is a need to deliver Teaching, besides providing tools for Learning to the students. Since it is difficult to synchronize the e-learning deliveries with the teaching taking place through conventional methods, all over the country, it is proposed that we should reach the students, at their Homes through DTH, besides reaching them at Institutions through IP N/w.

### MEDIUM SCENARIO IN INDIA

It may be noted that India has about 240 Million Homes (assuming on an average about 5 persons stay in a home). As per reports available, there are about 145 Million TV sets installed in Indian homes; which shall constitute to about 60.4% of Home Density. This large base of TV home density shall therefore turn out to be the most important ICT tool available in the hands of planners. The TV sets can form ready ground segment, if engaged in the reception of e-education, that too in rural part of the country.

Medium (As on March 31, 2010)	Installations in Millions	Home Density %
TV Sets (115M C&S + 30M T)	145	60.4
DTH ( TRAI Report)	35.6	14.8
PC	90	37.5
Broadband ( As on July 2011 report)	12.5 (14%)	5.2
Internet : 20.00 Millions	Number of TV Channels: 652	
No of wired Telephone lines	34.18Millions	
Mobile Subscribers	858.37 Millions	

On the other hand delivery of educational content through TV via DTH (using satellite in Ku band) is the answer to reach the masses instantaneously and economically. The DTH set up shall not take long time to get operational and at the same time it is less on investment and on recurring cost to the consumer too. The consumer shall not have to pay any monthly subscription for the services or bandwidth access charges, since the services are going to be free for all. The learner would prefer to watch the educational programmes at home, perhaps at late evenings and night. The DTH is the answer for all this.

The reception of the DTH services comprises of 60-90 Cm of satellite Dish antenna, LNB, Set Top Box (STB) and cable. There shall not be any encryption since the signals shall be Free to Air, hence the DTH reception system shall not be very costly. If marketing of DTH reception system is further focused properly, its cost may be brought down from Rs.1500/- to a substantial level.

### DTH IS COST EFFECTIVE:

From the above table it may be seen that in India we have an installation base of about 90 Million PCs, further we have about 12.5 million and 20 million Broadband and Internet connections installed, respectively. Although at present about 25% PCs are only internet or broadband connected. Assuming all the 90 million PCs are internet connected and receive e-Content, yet we have a huge difference of 55 million installation base between TV sets and PCs in India. It may take lot of time for PC to reach to the TV population and cost about 110 thousand Crores of investment (at a cost of PC as Rs.20,000/-) and recurring cost to receive the internet at home, since internet connectivity is going to be freely available to learners at educational institutions provided by the MHRD and the Institution. Therefore, we cannot afford to ignore the potential the TV has for us in education as delivery of educational content through DTH and IP is not only economic, but can enable half of the population start benefiting from the National Mission on Educational through ICT, shortly.

It is recommended that the Content Generation should begin together for delivery platforms such as TV & PC.

### MEDIA SCENARIO & TRANSPONDERS

The DTH educational Channels may run 8 hours of fresh programmes a day and repeat the programmes 2 times a day for global demand of different time zones. As reflected in

the Mission Document (NME-ICT) a number of about 1000 DTH Channels shall be launched and each channel shall be devoted to a specific subject. Following DVB-S2 Transmission and H.264 Compression, we require about 2 Transponders initially and about 50 transponders at latter stage. Dept., of Space /ISRO has been kind enough to provide two transponders of 36MHz bandwidth in Ku band from one of the recently launched Satellites GSAT-8 to MHRD for use in its educational DTH programme.

### CONTENT MANAGEMENT

Pre recorded content is available on a number of (i) engineering subjects under NTPL (ii) under graduate subjects under the CEC/UGC and (iii) other subjects at IGNOU and at other Institutions.

The contents shall be Digitized, Archived, Metadata created and Playlist made. Such stored content shall be used to support structured Dissemination along with Live transmission. The Metadata shall also help students to scan through the server and retrieve content as per his requirement and make it available to him via Uni-cast thro' Internet.

For launch of 50 DTH Channels, we need (a) accumulation of video based content from Institutions of Higher learning in the country and converting it into digital domain (suitable for video server) and (b) to select prospective institutions that can quickly deliver live lectures (rich in multimedia) in as many subjects. A quick and approximate analysis of recorded content available at Institutions of HE shows that NPTEL has ready video content of 110 courses amounting to about 4400 Hours of content out of Phase-I of their development. NPTEL Phase-II is expected to cover another 996 courses in engineering and assuming that 50% of it is being produced in video format, it will further enhance the video content by another 20,000 hours. Out of other national agencies engaged in generation of video content in Higher Education, CEC/UGC has about 18,000 video based programmes (approx., half hour duration), some of them are very old and roughly if it is assumed half of them are good to use, we have therefore around 4500 hours of programmes, however it is to be noted majority of these programmes are enrichment based content and not curriculum based content that is required in NME-ICT DTH programme, further the CEC content is yet to be digitised. CEC is also developing e-content; at present more than 1500 e-contents have been made having an accumulative video duration of about 700 hours. Besides

this, IGNOU is also having not more than 1000 hours of useful content needed.

### CONTENT REQUIREMENT

It is proposed that 6-8 lectures, each of one hour duration, LIVE lectures by subject experts shall be delivered, per day per channel. Each lecture would be of 40 minutes duration and followed by 20 minutes of interactive session. The questions can be asked by using any of the communication modes such as mobile, landline, video conferencing, SMS, e-mail, fax etc.

It is felt that we require about 3000 hours [365 days x 8 hours] of educational programmes per year per DTH channel. The content requirement for running 50 channels @ fresh programmes for 8 hours a day is 12,000 hours a month. It will therefore be very difficult to launch 1000 DTH channel based on pre-recorded educational content alone. It would therefore be appropriate to deliver larger part of educational content through LIVE broadcasting with live interactivity and we shall also use the pre-recorded content followed by live interactive sessions from student on teleconferencing (video) and calls generated through phone/mobile".

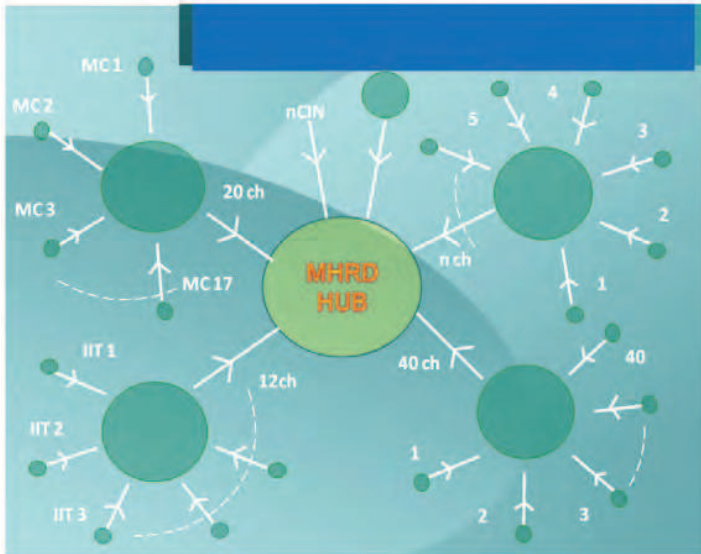
### NETWORK TOPOGRAPHY

For content generation, it is felt that all IITs, NITs, Central Universities, NITTTR, IIMs, IISc, Agriculture Universities, CEC & Media Centres, IGNOU etc., shall be involved in the first instance for 8 hours of live content generation a day, for supply to 50 DTH channels. For this the MHRD will provide the necessary equipment, infrastructure for establishment and funds to run it".

It is proposed to set up a technical system comprising of Multiple Star Network Topography by groups of Central Institutions, such as Central Universities Networks, IIT's network, NIT's Network, CEC Network, Agriculture universities network, Management Institution network etc.

Each of these Central Institution Networks shall derive technical and content support from respective institutions affiliated to it. The Central Institution Network shall generate more than one Channel.

# Technology Enabled Learning in Distance Education



## MICRO LEVEL DELIVERY

A Teaching End comprising of mini-studio shall be set up at each of Institutions. It is proposed 4-6 hours of live lectures (each lecture one hour duration) may be delivered by such Centres. A recorded programme of about half hour duration may be played in between two live sessions. The signals from each teaching end shall reach the Central Institution through Fiber and having a redundancy line.

## PRODUCTION METHODOLOGY

The subject experts shall be asked to use all convenient ICT aids of delivery material such as video clips, animation material, live internet, graphic, PowerPoint, text etc. It is proposed that an Interactive RF enabled White Board having facilities to generate over a click of button all such inputs shall be made available to the subject expert and the selected material shall be passed on to the live stream as Baseband TV signal, to benefit the students watching such programmes.

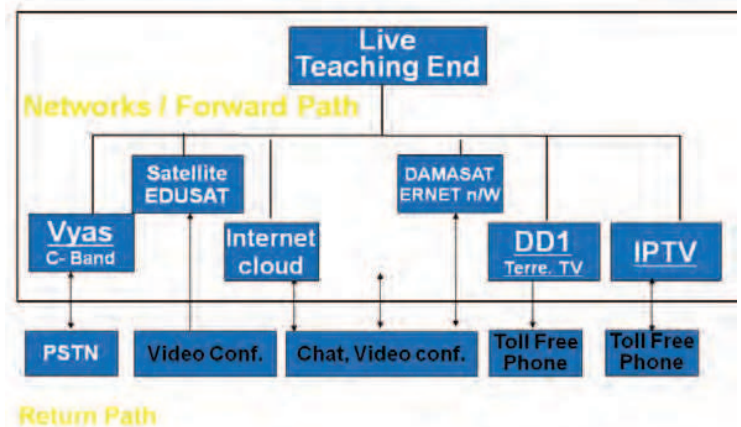
The Management Technical and Academic activities shall be looked after by each of the Central Institutions thus engaged for the purpose. It shall be the responsibility of the Central Institution to manage generation of content for channels in its network.

## MULTI MEDIUM DISSEMINATION

For utilising benefits of multimode reception techniques and for deeper dissemination of educational content, it

is desired to propagate simultaneously on TV, terrestrial, satellite, cable, IPTV, web, mobile and even on podcast versions. Further, a return path based on voice, Text, Messaging (SMS), Video conferencing etc., and amalgamate them shall be created in order to have real-time interactivity from student community, all over the country with the Expert/Teacher online to address their difficulties through the use of multi mode and Mediums such as Telephone (landline/mobile), Fax, internet, Satellite etc. Such a Unification of Networks along with return path is envisaged.

## Network Unification



## DTH PROGRAMME GUIDE:

The list of programmes, short synopsis etc., going to be televised on 50 DTH channels shall be made available in advance, to the public, at large. For this DTH Electronic Programme Guide (EPG) and a website to disseminate such information shall be created. Automatic SMS and e-mails messaging may be sent to registered students on this. Certain, channels may be kept reserved to serve the near video on demand (NVOD) services, wherein demand from students is collected on regular basis and the content delivered accordingly.



### TISS Mumbai to Open Off-Campus Centre in Guwahati

Tata Institute of Social Sciences (TISS), Mumbai has been allowed to open an off-campus centre at Guwahati, proposal for which was submitted on December 21st, 2009.

It may be mentioned that TISS Guwahati shall be a constituent teaching unit under the ambit of TISS. It will conduct academic course/programmes from the academic year 2011-12 subject to usual terms and conditions as prescribed under the UGC (Institutions Deemed to be Universities) Regulations, 2010.

It is pertinent to mention that TISS Mumbai was declared as an "Institution Deemed-to-be-University" under the University Grants Commission (UGC) Act, 1956 vide the MHRD's notification dated April 29th, 1964.

### NIT Council Endorses Ramasami Committee Recommendations

The NIT Council, which met on November 18th, 2011, under the chairmanship of Shri Kapil Sibal, Minister of HRD, has endorsed the proposal formulated by Dr. T. Ramasami Committee on Alternate System for Admission to undergraduate programmes in Science and Engineering in the country.

The Council was of the opinion that the proposal envisaged a "judicious mix of school and national level test performance and it would usher in an alternative admission system wherein multiplicity of tests and dependency on coaching would get reduced in a great measure." The Council members were also of the consensus that the proposal would be instrumental in aligning the testing process to Class XIIth syllabus.

Another decision taken at the meeting was according of "in-principle" approval for introduction of revised NIT Merit Award, with tuition fee waiver on graded basis, to all the students who were ranked in the top bracket of the AIEEE examination conducted by the CBSE and who took admission in the NITs. The NIT Merit Award also enlarges its scope of beneficiaries by proposing exclusive scholarships for meritorious SC/ST and OBC students. A revised Merit Award system is expected to be put in place from the academic year 2012-13.

While Shri Sibal chaired the NIT Council meeting, it was attended by the Chairpersons and Board of Governors of the NITs.

### UGC NET - Candidates Can Self-Evaluate Performance before Results

From the year 2012, the candidates appearing for the National Eligibility Test (NET) of the University Grants Commission (UGC) will be able to take their optical reader answer sheets with them so that they can evaluate their performance immediately after the test.

UGC chairperson Shri Ved Prakash said in December 2011, "This will enable students to know instantly how they have fared in the test." With this, the Commission has taken another important step, that of having all the question papers for the test as objective type, instead of two objective papers and one subjective paper, as was the case earlier.

Elaborating upon the effect of this decision, Shri Prakash said, "Now, we will be able to declare the results much before next NET and to the satisfaction of students. The format will be applicable for the June 2012 exam and results will be announced by October before the next exam in December 2012."

### JC Bose Fellowship 2011 Goes To Kashmir University VC



The prestigious JC Bose National Fellowship for 2011 has been awarded to Prof. Talat Ahmad, Vice-chancellor of Kashmir University for his pioneering contribution to earth sciences.

Dr SS Kohli, Director, Science and Engineering Research (SERC) Division, Department of Science and Technology, in a communication to Prof Ahmad, has said, "The award is a clear recognition of your outstanding performance and contribution to science."

The fellowship is named after the renowned scientist JC Bose and it recognizes active, performing scientists and engineers in the country who are below the age of 60

years. The Fellowships are scientist specific, very selective and have close academic monitoring.

Prof Ahmad holds a doctorate in Igneous Petrology from JNU as well as Post Doctoral Fellowships with the Universities of Leicester, UK, Cambridge, UK, and Nagota, Japan. Besides, he is also a Fellow of all the Science Academies of the Country: the Indian National Science Academy (FNA), New Delhi; the Indian Academy of Sciences, (IASc); and the National Academy of Sciences, (NASc).

### Regulating Bodies Plan No Inspection for HE Institutions in XII Plan

Placing emphasis on self-improvement, the University Grants Commission (UGC) and All India Council for Technical Education (AICTE) has decided to adopt a policy of self-disclosure and accreditation, instead of inspection, in granting approvals to new courses or upgradation of facilities at a higher education institution. This is an attempt to revamp the approach of the regulating bodies while dealing with the education institutions, as per the XII Education Plan.

Speaking of the 'self-disclosure' strategy that AICTE aims to adopt, council's Chairman Shri SS Mantha said, "We have provided the self-disclosure statements of over 10,000 institutions on our portal from next year for people to find out what the institutions are claiming is correct or not." He added that there should be a trust element between the council and the institutions for what they say. "Inspection will be conducted only on basis of a complaint," he said.

Meanwhile, the University Grants Commission, which administers more than 75 schemes of funding to Central and State Universities, is also planning to approve funds on the basis on accreditation of the institution.

### Rajya Sabha Gives Nod to Research Academy Bill

On December 22, 2011, the Rajya Sabha passed the Academy of Scientific and Innovative Research (AcSIR) Bill, which will lead to setting up an academy for innovative research in the field of science and technology.

Under the bill, the Council of Scientific and Industrial Research (CSIR) would be able to start an academy to award post-graduate and doctoral degrees, not before making certain amendments to the parent legislation. The institute will be known as 'Academy of Scientific and Innovative Research' and it will be an Institution of National Importance.

The Academy is believed to make it easier for scientists to pursue research in their chosen fields. Presently, research scientists need to register themselves with various universities while pursuing research in the CSIR laboratories.

### Enrolment in Open Universities – An Overview

The Higher Education system of India has grown systematically and significantly over years. With this, the growth of the Distance Education System has also been exponential, especially in the last four decades. With the establishment of Dr. B.R. Ambedkar Open University in Hyderabad, Andhra Pradesh, in 1982, closely followed by setting up of the Indira Gandhi National Open University by an Act of Parliament of India in 1985, a new chapter began in the distance education. Two more universities, namely Nalanda Open University, Bihar and Vardhman Mahavir Open University, Kota, Rajasthan, were added to this growing repertoire in 1987.

During 2009-10, there were 14 open universities in the country, which catered to about 35 lakh students in all out of which, about 40% (13,26,290) were female. To cater to such large student base, the Open Universities depended on a strong network of about 11,000 study centres and 70,000 academic counselors. The New Delhi-based IGNOU is the largest Open University, claiming about 72% (24,68,208) of the total enrolments in the Open Universities of India. About 38% (932507) of its students are female. The second-highest enrolment is in the Yashwantrao Chavan Maharashtra Open University, with 3,11,408 out of which about 40% (122242) are female. A total of 179868 students are enrolled in the oldest Open University, Dr. B.R. Ambedkar Open University, out of which 41% (74443) are female.

The Open Universities offer all kinds of programmes except those which are not allowed by the respective Statutory Councils in the country, such as Engineering, Medical, Dental, Nursing, Pharmacy, etc.

### 'Aakash' Presented at 36th Session of UNESCO General Conference

At the 36th Session of UNESCO General Conference in Paris, Shri Kapil Sibal, Minister of HRD presented \$35 'Aakash' Tablet to Ms. Katalin Bogyay, President, UNESCO. The device has been developed by India for distribution to students in Higher Education in India.

Shri Sibal was leading a high-level Indian delegation to UNESCO for the Session, which was held at the UNESCO Headquarters in Paris from October 25, 2011 to November 10, 2011. The Indian delegation had representatives from the Ministries of Human Resource Development, Culture, Science, Information and Broadcasting and External Affairs.

While addressing the Conference during the 'General Policy debate', Shri Sibal made an emphatic appeal to empower the youth by giving them the tools of education. The Minister also referred to the historic milestone achieved by India - enacting an enabling legislation to constitutionally guarantee the Right to Elementary Education.

*Following is an excerpt of the Minister's speech during the debate:-*

*"Literacy in the 21st century will carry a different connotation. It will no longer mean knowledge of the three "r's", but the ability to connect and comprehend*

*We have taken the lead in attempting to develop an access device - Aakash (meaning 'sky') - that aims to provide a medium for every child to access the digital world and to learn from the vast repositories of knowledge contained therein. Aakash presently costs less than \$50 and our endeavour is to further reduce the cost to less than \$35. We are going to provide Aakash to every student in higher education and gradually to every child in secondary education. We dedicate this device to the children of the world. We will equip our children with the tools to face the challenges of the 21st century.*

*I also believe that the nature of delivery of educational services in higher education is changing*



Shri Kapil Sibal, Minister of HRD, presenting \$35 'Aakash' Tablet to the President of the UNESCO General Conference, Ms. Katalin Bogyay at the 36th Session of the UNESCO General Conference.

*rapidly. It may be too early to write the epitaph for the classroom, but the classrooms of the 21st century will be different from those that served us in the past. The content of pedagogy too would be radically altered. The silos that fragmented knowledge have already started collapsing. Customized learning across cultures will be the dominant theme of higher education. We need to open up the university as a learning space, embrace collaborative knowledge production, and break down the walls between institutions. The university as a physical entity may no longer remain the unit of learning space."*

Earlier, Shri Sibal had launched 'Aakash,' a low cost access-cum-computing device, on October 5, 2011 in New Delhi. On this occasion, the device was also distributed among 500 children. While launching Aakash, Shri Sibal emphasized that the device will help in eliminating digital illiteracy. He also underscored the need for having high quality study content to be made accessible to students through the device and through other means.



### First India-US Higher Education Summit in Washington D.C.



*Sh. Kapil Sibal, Minister of HRD, and Ms. Hillary Clinton, the US Secretary of State at the India-US Higher Education Summit, at Washington DC on October 13, 2011.*

The first India-U.S. Higher Education Summit was jointly organized by the Government of India and the Government of United States in Washington D.C. on October 13, 2011. The Summit was jointly inaugurated by Shri Kapil Sibal, Minister of HRD and Ms. Hillary Clinton, the US Secretary of State. The event was attended by government officials and academics as well as individuals from the private sector who are involved in the Higher Education sector.

Recalling the considerable progress made by both the countries in achieving bilateral educational success, Shri Sibal and Ms. Clinton reaffirmed the strategic partnership between the two countries and acknowledged the immense possibilities for further collaboration. The event also launched the expanded India-US Higher Education Dialogue, as an annual bilateral event.

The main objective of the summit was to further strengthen Higher Education collaboration and exchange of ideas between the Indian and American

institutions. The summit also highlighted the importance of education as a pillar of the India-U.S. Strategic Dialogue.

In a joint statement, issued toward the end of the Summit, both the sides agreed to:

- (A) Promote strategic institutional partnerships for further strengthening and expanding collaboration in the priority areas of higher education;
- (B) Encourage expansion and deepened collaboration in research and development;
- (C) Foster partnerships in the areas of vocational education and skills enhancement;
- (D) Further strengthening program for student and faculty enrichment and exchange; and
- (E) Welcome involvement of the private sector in the two countries to support and deepen such collaboration.

The Summit is expected to provide a platform to the industry leaders, academia, and government officials on both side so that they can evolve further collaboration for mutual benefit in areas like student and faculty exchange, collaborative research, skill development, and innovation.

### Kapil Sibal, David Willets Co-Chair India-UK Education Forum

The fourth UK-India Education Forum was held on November 15, 2011, which was co-chaired by Shri Kapil Sibal, Minister of HRD and Mr. David Willets, UK Minister for Universities and Science. Besides reviewing the educational understanding between the two countries, the Forum endorsed stronger and deeper collaboration between the academia, private sector, and governments on both sides. The members of the Forum also welcomed the progress made in the Indo-UK educational relationship since last Forum.

Both the Ministers also announced awards under the UK India Education and Research Initiative (UKIERI) and



*Shri Kapil Sibal, Minister of HRD (Centre), Mr. David Willets, UK Minister for Universities and Science, and Smt. Vibha Puri Das, Secretary, Higher Education at the UK-India Education Forum, in New Delhi on November 15, 2011.*

reiterated their support to the programme. The awards, funded by the UKIERI in its first year, are given to encourage academic community to further engage and disseminate their learning to schools, universities, other fellow students and friends in both the countries.

Out of a total of 161 awards for 2011-12, 67 are for Higher Education Partnerships, 7 Skills Partnerships, and 87 Facilitation grants to travel between UK and India.

While acknowledging the work done by the UK Qualification recognition task force under strand 4 of UKIERI (Enhancing Mobility), the Ministers noted that both sides need to work on the key area of credit transfers and mutual recognition, to make the UKIERI an even better success.

### **Indo-US Educational Partnership held Important**

Underlining the importance of partnership between India and the US, in the education sector, Shri Kapil Sibal, Minister of HRD, said - that the "two countries, through partnership, can find the solutions for tomorrow..." (while addressing the US India Business Council (USIBC) on October 13, 2011.)

The Minister pointed out that India is the land of opportunity and it has a vast demographic advantage,

which needs to be harnessed in a manner to serve the world. Speaking of today's interconnected world, Shri Sibal said that the problems do not remain confined to the region in which they emerge. He suggested that the solutions to global problems can only be arrived at by studying them in the regions that they exist.

### **Indian Students Abroad - UNESCO Statistics**

The Ministry of Human Resource Development publishes its periodical assessment of the statistical development of Higher Education in its "Statistics of Higher and Technical Education." One of the major highlights of the 2007-08 edition of this publication is destination-wise list of the number of Indian students studying abroad.

With the Second Special Edition of The Newsletter on Higher Education in offing, it is only imperative that we cast a look at what these figures entail. However, before we do that, let it be known that the data was sourced from the "UNESCO Institute for Statistics." It would not be preposterous to say that Indian students are studying all over the world, right from the United States to Iran. A total of 1,76,881 Indian students have taken up studies abroad.

For the given year, the highest number of Indian students, 94664, is studying in the United States. Australia comes second with as many as 26520 Indian students studying for various courses in the country. The top three is completed with the United Kingdom, which hosts 25901 Indian students.

Apart from these three countries, quite a significant number of Indian students is also receiving education in the universities and institutions of countries such as Russian Federation (4314), New Zealand (4094), Germany (3257), Canada (3219), Ukraine (1785), Cyprus (1076), Malaysia (1065), and France (1038).

However, that is not all, because countries such as Kazakhstan, Italy, Japan, Thailand, Ireland, Saudi Arabia, Poland, Oman, Tajikistan, Austria, Bahrain, Norway, Romania, and Czech Republic, also host Indian students for various educational courses.

### Parliamentary Consultative Committee Meet

#### Need to Preserve Endangered, Classical Languages

Expressing his concern for the inadequate budget allotment for development, protection, and preservation of endangered and classical languages, Shri Kapil Sibal, Minister of HRD, said that there was need to strengthen the institutions that are working towards protecting and popularizing these languages. He was speaking at a meeting of the Parliamentary Consultative Committee on November 17, 2011. The meeting was on the topic, "Development of Indian Languages, Protection & Preservation of Endangered Languages and Classical Languages."

In this regard, the Minister informed the Committee members that the MHRD has set up a round table of experts and educationists to facilitate greater involvement of academic institutions in language development.

The Members of Parliament at the meeting also expressed their views on the subject. One of them was that besides the three language formula already adopted in development of various Indian languages, the students must be encouraged to learn a fourth local minor language.

A presentation was made to the Committee on the institutional arrangement and other efforts being undertaken by the Ministry of HRD for preserving and popularizing traditional and endangered languages. The Committee was also informed about the National Translation Mission (NTM), which is a government of India initiative set up in June 2008, to make knowledge based texts accessible in all Indian languages listed in the VIII schedule of the Constitution through translation.

The meeting was attended by Shri Ganeshrao Nagorao Dudhgaonkar, Dr. M. Thambi Durai, Shri Prem Das Rai, Smt. Rama Devi and Dr. Ranjan Prasad Yadav from Lok Sabha and Shri Ishwar Singh, Shri Mohammed Shafi, Shri G.N. Ratanpuri and Shri Derek O' Brien from Rajya Sabha. Also present were Dr. D. Purandeswari, Minister of State for Human Resource Development,

Smt. Vibha Puri Das, Secretary, Department of Higher Education, and Smt. Anshu Vaish, Secretary, Department of School Education and Literacy.

#### Union Cabinet Approves Amendment to Unfair Practices Bill

Providing an impetus to the Government's drive against unfair practices in Technical Education institutions, the Union Cabinet approved the official amendment to the Prohibition of Unfair Practices in Technical Educational Institutions, Medical Educational Institutions and Universities Bill, 2010 on November 16, 2011. This bill is based on the recommendations of the Parliamentary Standing Committee on Human Resource Development.

The Bill aims to bring into place an institutional mechanism for preventing, prohibiting and punishing unfair practices in technical and medical educational institutions as well as universities. The objective of the bill is to curtail the element of profiteering in some institutions which are presently beyond the scope of any such regulation. The institutions will also be subjected to mandatory disclosure of information related to admission process by publication of its prospectus. This is expected to increase public accountability of such institutions and act as a check on use of unfair practices being adopted vis-a-vis students.

The most important beneficiaries of the proposed legislation would be students, who are exposed to the prevalence of distortions in the admission process leading to harassment and extortion of students for admission.

#### IIM Directors Agree on External Review of IIMS

A meeting of IIM Directors has decided that each IIM should be subjected to an external review every three years. The meeting, held on November 2, 2011, was chaired by Shri Kapil Sibal, Minister of HRD and it was attended by Dr. D. Purandeswari, Minister of State of



HRD, Smt. Vibha Puri Das, Secretary, Department of Higher Education, Chairpersons and Directors of the IIMs, besides senior officials from the Ministry.

Besides reviewing the progress in the establishment of the new IIMs, the meeting was also informed that the land issues in respect of all new IIMs had been resolved.

Other issues discussed at the meeting are as follows:-

**1) Greater Autonomy for IIMs** - The Council noted that the revised Memoranda of Association (MoA) and Rules of Ahmedabad and Indore have been finalized.

**2) Faculty** - Director IIM Bangalore said that the process of devising a faculty review system is under consideration.

**3) Research** - The Government had approved a scheme for enhancing research in IIMs and increase the output of Ph.Ds from the IIMs.

**4) Quarterly Journal** - A discussion was held on bringing out a quarterly journal of IIMs showcasing research in the IIMs.

**5) Common Admission** - On this issue, the members decided that IIMs would share their admission information and co-ordinate their counseling systems with the new IIMs, which was expected to ease the pressure on students too.

### Cabinet Approves Proposal for Synergy in NMEICT, NKN

The Union Cabinet has approved the proposal for seeking directions for achieving convergence and synergy under the Centrally Sponsored Plan Scheme namely National Mission on Education through Information and Communication Technology (NMEICT), National Knowledge Network (NKN) and other issues, which are as follows:-

(i) Shifting the technology from Copper wire based connectivity to Optical Fibre Cable (OFC) based connectivity in respect of already connected universities/university level institutions ex post facto and connecting the remaining universities/university level institutions on OFC.

(ii) Raising the number of universities and institutions of national importance to be provided connectivity (utilising NMEICT and NKN).

(iii) Installation of routers and switches as part of LAN in all universities in NMEICT List as per the specifications indicated by NKN.

(v) Entrusting a feasibility study to NIC for connecting all 25,000+ colleges and Polytechnics to NKN on optical fibre and bringing all colleges in the country to NKN through optical fibre.

(vi) All technical aspects and architecture would be managed by NIC as the implementing agency for NKN for seamless integration between the two networks.

The e-content required henceforth would be generated under NMEICT Scheme and it is believed that students and learners of about 572 universities, 25000+ colleges and 2000 polytechnics will benefit from the scheme.

## Appointments/Retirements/Transfers

### Appointments

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Smt. Damayanthi K., Director  
Shri N.K. Pillai, Deputy Secretary  
Shri P.P. Nair, Under Secretary (US)  
Shri Rajesh Singh Solanki, US  
Smt. Veena Dunga, US  
Shri. M Sridhar, US  
Shri Lakhmi Chand Mehra, US  
Shri Parveen Kumar, US  
Shri Vijay Kumar, Section Officer (SO)  
Smt. V. Jayaraman, SO  
Shri Vikas Tripathi, SO  
Shri Kundan Nath, SO  
Shri K. Rajan, SO

### Retirements

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Shri R.N. Panda, Deputy Economic Advisor (T)  
Shri A.K. Jain, SO  
Shri R.P. Sharma, SO  
Shri S.S. Negi, SO  
Smt. Vina Aery, SO

### Transfers

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Shri Raj Kumar, US  
Shri S.R. Datta, SO  
Shri Pankaj Kumar, SO  
Smt. Urmila Balchandani, SO  
Shri Biswajit Banerjee, SO  
Shri Nishat Kumar, SO  
Shri Ashok Kumar Shah, SO  
Shri Narender Kumar, SO  
Shri Puran Chand, SO  
Shri Rama Shanker, SO  
Shri Nandan N., SO  
Shri Ambuj Bajpai, SO  
Shri Juel Minj, SO



Shri Kapil Sibal, Minister of HRD, speaking at the 'Centre for Strategic and International Studies' on 'Transforming India into an Education Hub', at Washington DC on October 11, 2011.

Shri Sibal meeting Mr. Ed. Fast, Canadian Minister of International Trade and Minister for the Asia-Pacific Gateway in New Delhi on November 3, 2011.



Shri Sibal and Mr. Farooq Wardak, Education Minister of Afghanistan, exchanging the signed documents of an MoU in the field of education between India and Afghanistan, in New Delhi on December 8, 2011.