

NATIONAL
CONVENTION ON
DIGITAL INITIATIVES
FOR HIGHER
EDUCATION

Vice Chancellors of all
Universities and Heads of all
CFTIs

*8th, 9th
and 10th
July*
Vigyan
Bhavan
New Delhi



सत्यमेव जयते

NATIONAL CONVENTION on DIGITAL INITIATIVES FOR HIGHER EDUCATION

**8th, 9TH, 10th JULY, 2017
VIGYAN BHAVAN, New Delhi.**

1. Context

On the auspicious day of Guru Poornima (9th July 2017), the Ministry of Human Resource Development will organize an innovation and best practices conference on digital initiatives in Higher Education. All Vice-chancellors of Central Universities, Deemed-to-be Universities, Private Universities, State Universities, State Private Universities, Directors of Central Institutes such as IITs, IIMs, IISERs, IISc, IIITs, NITs and other central institutes are expected to participate in the conference to be held in Vigyan Bhavan, New Delhi.

2. Digital revolution is bringing in sweeping changes in the Higher Education landscape. Every institute is taking various initiatives in promoting digital education. MHRD has taken up novel initiatives like SWAYAM (India's own MOOCs), Swayam Prabha, National Digital Library (containing 6.5 million books), and National Academic Depository. UGC has drafted New Online Education Regulation and rules for the same have also been framed. The conference intends to bring together to share best practices and experiences of all aforesaid initiatives and initiatives of private institutions as well.

3. The technology of online education and all the digital initiatives have the possibility to revolutionize higher education scenario in the near future. Other than the aforesaid initiatives MHRD has also started initiatives like "Cashless Campus" and Digital Financial Literacy of community by students. The National Convention is to further this drive and to take the fruits of these digital initiatives to the students.

Digital way for educational excellence

4. The aim to raise the Gross Enrolment Ratio (GER) in the higher education from 24.5 (2015-16) to 30 by 2020, and the quest to enhance the quality of education would require a large scale expansion of the high quality education opportunities. However, physical expansion of such facilities is fraught with both infrastructural and human resource limitations. Fortunately, in the days of fast expanding IT facilities, the technology can be leveraged to address these twin concerns **of enhancing access and quality.**

5. The use of technology through online education in higher education also becomes imperative due to the following factors:

- a) **Affordable:** Online education is cheaper than formal education without compromising on quality, thanks to low infrastructure costs and large learner base.
- b) **High Quality:** Online Education is directly delivered by the best teachers, assuring high quality of instruction.
- c) **Inclusive:** Online Education addresses the rural-urban divide which is manifested by the fact that at present India has 4.5% graduates in rural areas as against 17% in urban areas. For females, the disparity is starker: 2.2% female graduates in rural areas, as against 13% female graduates in the urban areas.
- d) **Employability:** By a flexible curriculum that is in line with the current market requirements, the online education can enhance the employability quotient in the youth.
- e) **Uses internet:** The penetration of IT infrastructure is expected to increase the internet users from 40.9 Cr in 2016 to 73.5 Cr by 2021. This will enhance access to online courses to the youth.
- f) **Smart Phones:** Increasing penetration of smart phones, which is expected to increase from 29 Cr (2016) to 47 Cr (2021), would further facilitate the use of the online courses using the telecom spectrum.
- g) **Higher spend:** The households' spend on higher education is going to increase in future, affording opportunity for the hitherto unreached population to the portals of higher education.
- h) **Retraining the workforce:** The pressing need of the employment sector for re-training and career upgradation as per the needs of the market is best served by online education leading to Life-long learning.
- i) **Skilling the unskilled:** The Skill India Mission would certainly require online courses for reaching out to the large number of unskilled or semi-skilled population to help them to upgrade their skills.

The education through digital mission holds promise since it is accessible to everyone, it is affordable, it can overcome the shortage of quality faculty and it can enhance the enrolment in higher education system. The digital learning platforms provide opportunities for lifelong learning.

6. Keeping this in view and to democratise the opportunities of quality education, the Government has launched the National Mission on Education through ICT (NMEICT) to translate the power of IT into expanded learning opportunities. Over a period of time, NMEICT has made significant gains by developing IT interventions that have potential to change the higher education scenario.

7. In order to launch and promote these digital modes of education, it is proposed to have a **National Convention on Digital Initiatives for Higher Education** on **8th, 9th and 10th July 2017** at Vigyan Bhavan, New Delhi.



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2. Objectives of the convention

a) To **launch the various digital initiatives** for higher education namely:

- a. **SWAYAM** – the indigenous MOOCs portal,
- b. **SWAYAM-Prabha** – the (32) Direct-to-Home channels for transmitting high quality educational content on 24X7 basis direct to every home, without any charge
- c. **The National Digital Library** – with more than 72 lakh digital books
- d. **The National Academic Depository** – for authenticating all the certificates issued by institutions and for authenticating them as per the need of the users.

To familiarise the leaders of higher education on these initiatives and to evolve action plans for effective adoption and utilisation of these digital initiatives in the higher educational institutions.

b) Discussion on “**UGC Regulation for Online education 2017**” and evolving action plans for their adoption.

c) Share experiences of **best institutions using digital education** initiatives.

d) Action plan for promoting the **digital financial literacy** in higher educational institutions.

3. Location

The National Convention will be held as follows:

Day/time	Participants	Location
8 th July 11 a.m. to 1 p.m.	Meeting with Vice Chancellors of all Central Universities and Directors of all CFTIs	Hall No. 4 Vigyan Bhavan
8 th July 3 p.m. to 5 p.m.	Meeting with Vice Chancellors of all Deemed to be Universities	Hall No. 4 Vigyan Bhavan
9th July 10 a.m. to 5 p.m.	All VCs, Directors of all CFTIs	Plenary Hall Vigyan Bhavan
10 th July 11 a.m. to 1 p.m.	Meeting with Vice Chancellors of all Private Universities	Hall No. 6 Vigyan Bhavan
10 th July 3 p.m. to 5 p.m.	Meeting with Vice Chancellors of all State Funded Universities	Hall No. 6 Vigyan Bhavan

4. Participants

- i) Directors of all institutes of national importance, i.e. IITs/NITs/IIMs/IIITs, IISERs and SPAs.
- ii) Vice Chancellors of Central Universities.
- iii) Vice Chancellors of State Public Universities.
- iv) Vice Chancellors of Private Universities.
- v) Vice Chancellors of Deemed to be Universities.

Only the Vice Chancellor or the Pro-Vice Chancellor of the institution would be permitted.

5. Presentations on digital education: 8th and 10th July

8th July: Hall 4, Vigyan Bhavan

Session 1: Central Universities and CFTIs:

Session 2 : Deemed to be Universities

10th July: Hall No. 6 Vigyan Bhavan

Session 3: State Private Universities

Session 4: State Public Universities

Many institutions have done work in the field of creating digital content for furthering education. In these sessions, the selected institutions would be showcasing their work, followed by a discussion on how to broad-base similar efforts.

Modalities:

1. All Institutions which have done work in creating digital content are requested to send a brief write-up on the work done by them on or before **5. P.M. on 30th June 2017** to the following coordinators:

Institution	Coordinator
IITs & IIITs	Director IITs
IIMs, IISc and IISERs	Director IIMs
NITs, SPAs and other CFTIs	Director NITs
Central Universities	Director CUs
State funded Universities	Director HE
State Private Universities	Jt Secy UGC

2. The Coordinators will shortlist, based on the work done by them and intimate the selected institutions on **3rd July 2017**.
3. The selected institutions will be asked to make presentation or films showing their work and share the same with the Coordinators **by 6th July 2017**.
4. The presentations would be finalised by the Coordinators well in time for the presentation on 8th /10th July.
5. The purpose of these sessions is to help in evolving action plans and to seek ideas for improving the processes of learning using digital modes.



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Schedule

8th July

Session 1: Central Universities and CFTIs	
9.30AM – 10 AM	Opening remarks by Secy (HE) and HRM
10AM – 12.00PM	Presentations by NPTEL (15 minutes) and (10) other Central Universities, CFTIs and IISc (each for 10 minutes)
12:00PM – 1.30PM	Open House on innovations in broadbasing the digital education
1.30PM- 2.30PM	Lunch
Session 2: Deemed to be Universities	
2.30 PM – 3.00 PM	Opening remarks by Secy (HE) and HRM
3.00PM – 5:00PM	Experiences in Digital Education by Deemed-to-be Universities (10 presentations, each 12 mins)
5.00PM – 6:00PM	Open House on innovations in broadbasing the digital education

10th July

Session 3: State Private Universities	
9.30AM – 10 AM	Opening remarks by Secy (HE) and HRM
10AM – 12.00PM	Presentations by (10) best Private universities each for 12 minutes
12:00PM – 1PM	Discussion on broadbasing the digital education effort
1PM-2PM	Lunch
Session 4: State Public Universities	
2 PM – 2.30 PM	Opening remarks by Secy (HE) and HRM
2.30PM – 4:30PM	Experiences in Digital Education by State Public Universities (10 presentations, each 12 mins)
4.30PM – 5:30PM	Discussion on broadbasing the digital education effort

**9th July:
Launch of Digital initiatives and adoption of action plan for their
promotion**

Venue: Plenary Hall, Vigyan Bhavan, New Delhi.

With a view to improve the quality of education using the ICT and to translate the power of IT into expanded learning opportunities, the National Mission on Education through ICT (NMEICT) was launched. Over the last 3 years, the NMEICT has made significant gains by developing IT interventions that have potential to change the higher education scenario.

Programme

10.00AM – 11.00AM	Inaugural function of the National Convention
11.00AM – 12.00PM	Launch of SWAYAM, Swayam Prabha, NDL and NAD (4 presentations)
12.00PM- 1.00 PM	Discussion on action plans for taking these initiatives to the students
1.00 PM- 2.00 PM	Lunch
2.00 PM – 4:00PM	Presentations on: New Online Regulation, eShodh Sindhu, Virtual labs, eYantra, Campus connectivity, Talk-to-teacher, eAchaya, eKalpa, FOSEE and eVidwan
4.00 PM – 4.30 pm	Adoption of action plan for implementation of these digital initiatives in the universities
4.30 PM - 5:15PM	National Digital Payment Mission and promotion of digital payment system in the campuses: presentation, discussion and action plan
5:15PM – 6.00PM	Concluding session – final remarks by Hon'ble Minister for HRD

These initiatives would be launched/dedicated to the Nation during the Convention.

1. Study Webs of Active Learning for Young Aspiring Minds (SWAYAM):

SWAYAM is an indigenous (Made in India) IT Massive Open Online Courses (MOOCs) Platform for providing best quality education that can be accessed by anyone, anytime and anywhere using the IT system.



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The Concept of Massive Open Online Courses (MOOCs) involves online delivery of interactive learning content to large number of people simultaneously. It allows sharing of best quality education with everyone, thereby bringing in equity as far as the quality of education is concerned. There are 4 quadrants in the MOOC pedagogy:

- a) e-Tutorials covering a whole course – normally having about 40 hours of teaching learning material in the form of lectures, each video lecture not exceeding 30 minutes.
- b) E-Content: self-instructional material, e-Books, illustrations, case studies, presentations etc., that could add to the learning imparted through the video tutorials.
- c) Self Assessment: Problems and Solutions that intersperse the course
- d) Discussion forum for posting queries & doubts and clarifying them.

SWAYAM would allow students in any part of the Country to take Courses offered by the best teachers in the Country, thereby allowing access to premier education to all.

Features of SWAYAM

1. High quality learning experience using multimedia on anytime, anywhere basis.
2. One-stop web location for interactive e-content for all courses from School to University level.
3. State of the art system that allows easy access, monitoring and certification.
4. Peer group interaction and discussion forum to clarify doubts
5. Hybrid model that adds to the quality of class room teaching

Creation of the IT Platform

M/S Microsoft has been entrusted with the responsibility for creating the IT platform. Beta (β) Version of SWAYAM Portal has been launched on 15.08.2016. The full version is functional since October 2016.

Content creation

Courses under SWAYAM would be available in the following levels: For each level, there is a National Coordinator, who would be responsible for the quality of content:

- a) Out of school Children: for classes 9th to 12th (National Coordinator: National Open School Society)
- b) School children in classes 9th to 12th (National Coordinator: NCERT)
- c) Undergraduate (non-engineering) courses (National Coordinator: CEC)
- d) Post graduate (non-engineering) courses (National Coordinator: UGC)
- e) Engineering Courses (National Coordinator: IIT Madras)

- f) Management Courses (National Coordinator: IIM Bangalore)
- g) Out of college students (National Coordinator: IGNOU)
- h) Teaching the teachers (National Coordinator: NITTER Chennai)

So far, there are (408) courses made available on the portal prepared by chosen professors from across the Country.

The Guidelines for Development and Implementation of Massive Open Online Courses (MOOCs), which prescribe the quality standards, have been framed by the MHRD and communicated to all concerned vide communication dated 11th March 2016; and they were further updated in June 2017 after a National Convention held by Minister for HRD.

Apart from this, NMEICT has funded the National Program on Technology Enabled Learning (NPTEL), which is a group of 7 IITs and IISc. NPTEL (<http://nptel.ac.in>) is a joint initiative of IITs and IISc funded by this Mission and provides e-learning through online Web and Video based courses in engineering, science and humanities streams and provides free online courseware. NPTEL have so far developed e-content in 23 Disciplines numbering 933 Courses. The NPTEL is expected to complete more than 990 Courses by December 2016. This content is also available on YouTube and on NPTEL Server and viewership of both has crossed 280 million. NPTEL takes the credit of world's most accessed Educational Channel.

Regulation

University Grants Commission (UGC) has vide Gazette Notification dated 19th July, 2016, notified Regulation, 2016 regarding 'Credit Framework for Online Learning Courses through SWAYAM'. Accordingly, a student studying at a recognised institute anywhere in the country and having cleared the Online Course through SWAYAM, shall be awarded Credits and the credits earned by such a student shall be transferred from the Host Institute to the Parent Institute where the student is studying. However at present, the Credits up to 20% of the total courses can only be earned in a Semester by such students through online learning delivered on SWAYAM platform.

Nearly 10 lakh students would be able to access courses on this Platform simultaneously. The students will be able not only access the best teaching resources, but would be able to interact with the teachers from anywhere in the Country using the IT systems. Backward rural areas can access teaching from the best institutes in the country electronically, thereby, raising the overall standards of higher education in the country.

2. SWAYAM Prabha: the 32 Educational DTH Channels:

The SWAYAM PRABHA has been conceived as the project for telecasting high quality educational programmes through 32 DTH channels on 24X7 basis. Every day, there will be new content of at least (4) hours which would be



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repeated 6 times a day, allowing the student to choose the time of his convenience.

The DTH Channels cover:-

(a) Curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses would be certification-ready in their detailed offering).

(b) School education (9-12 levels) modules; for teacher training as well as teaching and learning aids to children of India to help them understand the subjects better and also help them in better preparedness for competitive examinations for admissions to professional degree programmes.

(c) Curricula and courses that can meet the needs of life-long learners or Indian citizens in India and abroad.

(d) IIT-PAL - to assist the students in the Classes 11 and 12 aspiring to join IITs by encouraging scientific thinking and conceptual understanding critical to answer the 'tough' questions of JEE Advanced, so that good quality students enter the portals of IITs. The four channels under this would be on Mathematics, Physics, Chemistry and Biology.

The project was conceived and completed within 3 months with the active participation of the Bhaskaracharya Satellite Application Centre and Geoinformatics (BISAG) Gandhinagar and ECIL Hyderabad.

3. National Digital Library (NDL)

A Project titled "Development of National Digital Library of India, Towards Building a National Asset" has been sanctioned to IIT, Kharagpur under NMEICT by MHRD. National Digital Library in India aims to collect, preserve and disseminate entire intellectual output of our country and provide online access from school level to post graduate level, including technical education. The project aims to develop (i) overall framework to collate large number of e-contents for school, college and higher education, e-content, virtual library, covering needs of learners with differing abilities (ii) Design & development of "OAI-PMH" Server for Metadata Harvesting, Indexed etc. (iii) serve as a pan-India virtual teaching-learning-evaluation-knowledge platform and for key national asset and (iv) collect resources from other Ministries such as Ministry of Culture, Health, Rural Development & Department of Science & Technology on this portal.

There are more than 72 lakh digital books available through the NDL. The contents cover almost all major domains of education and all major levels of

learners from school level to the highest level of education including life-long learners. More than 15 lakh students have registered themselves in the NDL. The NDL is available through a mobile app too.

4. National Academic Depository

National Academic Depository (NAD) is an initiative of Ministry of Human Resources Development, Govt. of India (MHRD) to facilitate digital issuance, storage, access and verification of Academic Awards issued by Academic Institutions. NAD is a Unique, Innovative and Progressive initiative under "Digital India" theme towards achieving Digital enablement of the Education Records.

NAD aspires to make the vision of Digital Academic Certificates for every Indian a reality. This touches the lives of Indian youth and empowers them with Digital, Online, Trusted, Verifiable Certificates which are accessible in a secure manner at all times. NAD promises to do away with difficulties / inefficiencies of collecting, maintaining, and presenting physical paper certificates.

5. e-Shodh Sindhu:

More than 31,35,000 e-books, 15,000 e-journals, 40 Resources, 16 Databases are made available to all the higher educational institutions through the e shodh Sindhu initiative. This allows access to be best education resources in the world using digital mode. The INFLIBNET, Gandhinagar, Gujarat is implementing the Scheme.

5. Virtual Labs

Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge. With the present day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible. Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced



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concepts through remote experimentation. Today most equipment have computer interface for control and data storage. It is possible to design good experiments around some of these equipment, which would enhance the learning of a student. Internet-based experimentation further permits use of resources – knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).

Virtual Lab does not require any additional infrastructural setup for conducting experiments at user premises. One computer terminal with broadband Internet connectivity is all that is needed to perform the experiments remotely.

Over 205 virtual labs in 9 Engineering & Science disciplines, comprising about 1515 experiments are operational and currently being accessed by more than 6 lakh students.

6. e-Yantra

An MHRD initiative under NMEICT Programme, named “e-Yantra” is implemented to incorporate Robotics into engineering education with the objective of engaging students through exciting hands-on application of mathematics, computer science, and engineering principles. Creation of robotic platforms has been very successfully demonstrated during phase-I of the project. Presently, e-Yantra has been implemented in 100 colleges. e-Yantra is creating skills by setting up lab infrastructure for project based learning and training teachers in these 100 engineering colleges. Going ahead, MHRD sees the core skills developed by IITB as generating, distributing and analyzing content to further create manpower with practical skills. All the projects and code are available on the e-Yantra web-site www.e-yantra.org as open source content.

7. Campus Connectivity

Establishment of 1 GBPS Connectivity to universities and 20 512 Kbps broadband connectivity to colleges has been provisioned under NMEICT. A total of 600 Universities have been connected through 1 Gbps Optical Fibre; 22026 Colleges have so far been connected with 10 Mbps bandwidth.

On the lines of ‘Digital India’ initiative of the PMO, the MHRD has now decided that the campuses of Universities, (having 1 Gbps bandwidth) shall be made WiFi enabled campus.

Already all the IITs, IIMs, and NITs have established WiFi campuses. The process of laying the optical fibre and provision of the WiFi in Central Universities is currently underway.

8. Talk to a Teacher

Talk to a Teacher developed by IIT Bombay, is an initiative of the National Mission on Education through ICT, funded by MHRD to provide free access to a few selected graduate and postgraduate courses, taught at IIT Bombay by distinguished faculty members and scholars at large. It uses A-View collaboration tool developed by Amrita University for providing virtual classrooms to the faculty across the country.

These courses can be viewed absolutely free of charge at lower bandwidths on a personal computer/laptop having a headphone and Internet connection. Registration is not required as it does not have any evaluation/certification process. The courses are recorded live in the classrooms of IIT Bombay and may not reflect entire content of the course. Apart from the core courses in engineering and computer science disciplines, the program also covers Humanities & Social Sciences discipline.

More than 80,000 teachers have been trained, so far, under this project, involving synchronous delivery of courses from IIT Mumbai & IIT Kharagpur.

Ask A Question:

Ask A Question is a unique platform through which students from science and engineering colleges all over India can ask questions and faculty from IIT Bombay answers them. Students can ask questions either through an online forum or during an interactive live session. Interactive live sessions are held on every Thursday from 4:00 P.M to 5:00 P.M in the field of Electrical Engineering and every Friday from 4:00 P.M to 5:00 P.M in the field of Physics.

9. e-Acharya:

e-Acharya also called 'Integrated e-Content Portal' of NMEICT, is the official repository of NMEICT e-content and all content produced under NMEICT is being put at this Repository platform at INFILIBNET Centre Gandhinagar, so to apply basic tenets of preservation for digital content, implement standard Metadata schema of different types for the digital content and ensure their long-term availability.

All the Project Investigators awarded development of e-Content under NMEICT have been requested to ensure the deliverables are placed, at the



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earliest, in the Integrated Portal/e-Acharya of MHRD. Further the NCERT shall provide e-content Links to e-Acharya and the NOIS shall providing the content on HDD to the e-Acharya repository and both shall ensure that all the content including e-Books are made available on e-Acharya. The e-Acharya besides a repository of content shall also have the Metadata of all these contents and it shall form a vertical of 'National Digital Library' (NDL), being implemented by the IIT Kharagpur.

The e-Acharya shall be backed by a robust 24X7 Data Centre, which shall be integrated with NMEICT, Cloud network, set up at NIC / NKN Data Centre by the IIT-Delhi and called 'Baadal'. The MOOCs being produced under NMEICT shall also be uploaded on e-Acharya.

10. E-Kalpa

Another MHRD/ NMEICT initiative named "**e-Kalpa**" creating Digital-Learning Environment for Design in India has successfully demonstrated the achievement of the following project objectives, on completion of its phase-I:

1. Digital online content for learning Design with e-Learning programs on Design
2. Digital Design Resource Database including the craft sector
3. Social networking for Higher Learning with collaborative Learning Space for Design
4. Design inputs for products of National Mission in Education through ICT

E-kalpa is a design-learning environment, URL link www.dsource.in, available as downloadable mobile app also. The text can be read in a number of international & Indian languages. The e-Content is provided in six sections that consist of 95 courses, 465 resources, 206 case studies, 16 showcases, 455 galleries and 298 videos.

11. The Free and Open Source Software for Education (FOSSEE)

FOSSEE project sanctioned to IIT Bombay has been promoting use of open source software in educational institutions (<http://fossee.in>). It does through instructional material, such as spoken tutorials, documentation, such as

textbook companions, awareness programmes, such as conferences, training workshops, and Internships.

Textbook Companion (TBC) is a collection of code for solved examples of standard textbooks. About 2,000 college students and teachers have participated in this activity & close to 1,000 TBCs have been created in Scilab and Python alone. FOSSEE has made all the TBCs open source and has made them available for free download. Scilab and Python TBCs are also on the cloud, so that one needs only a browser to access/execute the codes of TBC.

FOSSEE is promoting the well established open source software: OpenFOAM, an alternative to the proprietary software Fluent for computational fluid dynamics; DWSIM, an alternative to the proprietary software Aspen Plus, for chemical process simulation. FOSSEE has also undertaken several new open source software activities as well: raising Scilab toolboxes to that of Matlab; development of eSim, an electronic design automation software, an alternative to ORCAD; development of Sandhi, a software for data acquisition and control, an alternative to LabVIEW. The FOSSEE team works on open source hardware projects, such as Open PLC and Arduino as well. Through all of these projects, a large number of students across the country have been trained.

12. e-Vidwan

The 'Information and Library Network' (INFLIBNET) Centre took the initiative called "Vidwan: Expert Database and National Researcher's Network" with the financial support from NMEICT. The objectives of VIDWAN is to i) collect academic and research profiles of scientists, faculty and research scientists working in leading academic and R&D organizations in India and abroad; ii) quickly and conveniently provide information about experts to peers, prospective collaborators, funding agencies, policy makers and research scholars in the country; iii) establish communication directly with the experts who possess the expertise needed by research scholars; iv) identify peer reviewers for review of articles and research proposals; and v) create information exchanges and networking opportunities among scientist.

The database can be used for selection of panels of experts for various committees and taskforces established by the Ministries / Govt. establishments for monitoring and evaluation purposes. Further, the availability of single point expert database will help the policy makers and funding agencies in decision-making and policy intervention. As on 31st December 2015, the database contains more than 17,500 profiles of experts from 2,000 leading academic institutions, universities, R&D organizations including IITs, CSIR, DRDO, etc.



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13. Central cloud Infrastructure:

The MHRD under NMEICT has awarded a project to IIT Delhi, to set up a robust 24X7 backed Data Centre and the activities have been put up at NIC / NKN Data Centre, and the cloud is called 'Baadal'. The IIT Delhi cloud is hosting e-content and video content of e-Acharya.
