

## ICT INITIATIVES BY THE MINISTRY OF EDUCATION IN INDIAN UNIVERSITIES

<b>Dr. Sachin Suryawanshi</b> Librarian Bharati Vidyapeeth Deemed to be University, Pune	<b>Dr. Mohan L. Jamadade</b> Librarian Bharati Vidyapeeth, Deemed to be University, Pune	<b>Mrs. Pooja R. Rathod</b> Research Scholar Bharati Vidyapeeth Deemed to be University, Pune
--	--	---

**Abstract :** *Traditional academics and research have undergone various changes in the present century and e-resources have great importance in academics and research because, in today's rapidly changing world, the information needs of learners and knowledge seekers are met through a plethora of sources. Development in information and communication technology has greatly changed the methods of information handling; new technologies have always been of interest to academics and researchers for the potential of increasing the quality of work and improving the efficiency of the operation of research.*

*In this paper, we know the importance, challenges and types of E-resources. It is now hard to imagine a world without E-resources. The stipulation and use of E-resources is an element of the complete system for students and the institution's information professionals. The E-resources like- E-books, E-Journal, E- theses, Consortia, E-zine, E- Newspaper, UGC INFLIBNET, Swayam, MOOC, Vidhwan, E-shodshindu, Shodhganga, JCCC, stored in electronic form as the database are accessed at great speed by the user to save his valuable research time and increase the efficiency and effectiveness of quality research.*

**Keywords :** *E-book, INFLIBNET, Swayam, MOOC. Technology, E-shodshindu*

### **Introduction :**

The Indian government is eager to use technology to advance its mission of giving all deserving students access to higher education. It launched the National Mission on Education through Information and Communication Technologies (NMEICT) in 2009 to close the digital divide and provide all educators and experts in the country the chance to share their expertise for the benefit of all Indian students. Under this Mission, we attempt to strike a sound balance between content production, research in vital areas related to education delivery, and connection for integrating our knowledge with innovations throughout the world. For this, a critical mass of experts from all fields must collaborate in this Mission seeks to support such initiatives and take advantage of programmatic overlaps by adopting a comprehensive strategy. ICT needs to be given more attention because it enables educational institutions to grow their capacity while upholding high standards. The Mission is crucial for creating new, emerging transdisciplinary knowledge sectors and for preserving our economy's rapid growth rate through population knowledge empowerment and capacity building.

## **Department of Higher Education :**

The Department of Higher Education, MoE, is in charge of developing the overall framework for the higher education sector in terms of both policy and planning. The Department is in charge of expanding access to higher education and enhancing its quality through prestigious universities, colleges, and other institutions following a planned development strategy. This is a list of the department's vision, mission, goals, and duties.

## **The function of HM :**

- Gross Enrolment Ratio will be improved by increasing access across all channels.
- Encouraging those social groups whose GER is lower than the national average to participate.
- to raise standards and encourage academic changes
- Creating new educational institutions, as well as enhancing and expanding their capabilities.
- Technological Usage in Higher Education
- Vocational education and skill development are developing.
- Language development in India.
- Education-related international cooperation.

## **National Education Mission :**

The National Mission on Education through Information and Communication Technologies (NMEICT) is a federally funded initiative to maximise the use of ICT All students enrolled in institutes of higher learning, wherever they may be at any given time, will benefit from the teaching and learning process. The goal of this intervention was to significantly increase the Gross Enrolment Ratio (GER) in Higher Education throughout the XI Five Year Plan by 5 percentage points. All colleges and universities should be connected, students and teachers should have affordable, easily accessible computers, and the best online learning resources should be made freely available to all students in the nation. This would support the three guiding principles of education policy: access, equity, and quality. HRD's ICT initiatives

## **ICT initiatives by HRD :**

**SWAYAM** : (**Study Webs of Active–Learning** for Young Aspiring Minds) is a programme started by the Indian government that aims to attain the three guiding principles of access, equity, and excellence in education policy.

SWAYAM, or Study Webs of Active Learning for Young Aspiring Minds, is a government of India programme that allows academics and faculty at government-funded universities such as IITs, IIMs, and the Central University of Haryana to offer online courses to Indian residents. SWAYAM, a free online learning platform, was developed with the help of Microsoft, the MHRD, the Government of India, and the AICTE. It offers a large number of credit-transferable courses.

All classes in this programme are free; however, there are fees if the learner requires a certificate. IIT Bombay, IIT Madras, IIT Kanpur, IIT Guwahati, University of Delhi, Jawahar Lal Nehru University, IGNOU, IIM Bangalore, IIM Calcutta, and Banaras Hindu University will all offer courses in engineering education, social science, energy, management, and basic sciences in the first phase independently and with the assistance of faculty from foreign universities. This project is expected to benefit at least one crore of students in two to three years.

India is one of the few countries in the world with its own interactive online learning platform, which provides not only video lectures and reading material, but also assignments and quizzes that may result in credit after the assessment procedure is completed. Former Indian President Shri Pranab Mukherjee launched the 32 DTH channels SWAYAM and SWAYAM Prabha, which will use the GSAT-15 satellite transponders to broadcast educational content for free.

### **National Digital Library :**

The National Digital Library of India (NDLI) is a virtual library featuring search and browse functionality as well as several other services for the learning community. The Ministry of Education sponsors and guides it.

Indian government's National Mission on Education via Information and Communication Technologies (NMEICT). Focused searching is made easier by the use of filtered and federated searching, allowing students to access the appropriate resource quickly and easily. NDLI offers services tailored to the needs of particular user groups, such as exam preparation for high school and college students as well as job seekers. Services are also offered for general learners and researchers. The NDLI provides interface support for the top 10 spoken languages in India and is built to hold content in any language. It is designed to accommodate students of all academic levels, including researchers and lifelong learners, all academic specialities, all widely used access devices, and students with disabilities. It is made to make it possible for people to learn from and get ready for excellent practices.

### **PG Pathshala :**

The MHRD has launched e- Pf Pathsaala. Under it, the UGC e-Adhyayan is carrying out the National Missing on Education through ICT (NME-ICT) project (e-Books) A site called "e- Adgyayan" offers 700+ books for post-graduate courses. All of the electronic books are based on the e-PG Pathsala Course. It also made the list of video content easier to play.

One vertical to provide courses on a postgraduate subject in SWAYAm is the UGC MOOCs (Online Courses) ( Online Courses, An Mhrd Initiatives) SWAYAM's national coordinator is UGC, while INFLIBNET is a technical partner for UGC's MOOCs.

**(Offline Access) e-Pathya :**

One of the verticals of e-Pg Pathshala, a software-driven course/content package that supports students pursuing higher education (PG Level) through both campus-based and distant learning, is e-Pathya. It also allows for offline access.

**Shodhganga :**

Based on UGC notice, is a national repository of full-text electronic theses and dissertations. To facilitate open access to Indian theses and dissertations by the academic community worldwide, the UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) dated 1st June 2009 mandates submission of electronic versions of theses and dissertations by researchers in universities within 30 days of award of the PhD. With a disclaimer that the Intellectual Property Rights (IPR) of the content are with the Research Scholars and Universities, INFLIBNET Centre has the non-exclusive right to host the content on "Shodhganga."

"Shodhgangotri" is a database of electronic synopses and research proposals that were submitted to universities before receiving a Ph. D. After registering for both "Shodhgangotri" and "Shodhganga," scholars are allowed to submit synopses and theses online.

**E-shodshidhu :**

The Ministry of HRD (formerly known as the Ministry of Education) developed e-ShodhSindhu by uniting three consortia initiatives, namely the UGC-INFONET Digital Library Consortium, NLIST, and INDEST-AICTE Consortium, based on the advice of an expert committee. The e-ShodhSindhu will continue to offer its member institutions, including centrally-funded technical institutions, universities, and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act, current as well as archival access to more than 10,000 core and peer-reviewed journals and several bibliographic, citation, and factual databases in different disciplines from a large number of publishers and aggregators.

**The major goal of the e-ShodhSindhu :**

Consortia for Higher Education E-Resources is to give academic institutions access to high-quality electronic resources, including full-text, bibliographic, and factual databases, at cheaper subscription costs. The following are the main goals and objectives of the e-Shodh Sindhu

**E-yantra :**

IIT Bombay is the host of the Ministry of Education-funded robotics outreach initiative known as e-Yantra. The objective is to utilise the skills of young engineers to find technological solutions to issues in a range of industries, including service, manufacturing, defence, home, and agriculture.

**FOSSEE (Free/Libre and Open Source Software for Education) :**

The project encourages the use of FLOSS tools in research and education. The FOSSEE project is a component of the Indian government's National Mission on Education through Information and Communication Technologies (ICT). The list of projects that FOSSEE promotes is provided below.

#### **Activities :**

The following FLOSS tools are encouraged to be used by the FOSSEE Project to raise the standard of research and education: Via the activities described on this page, we encourage professors and students to use these tools in research and instruction to promote them.

- Textbook Companion
- Lab Migration
- Niche Software Activities
- Forum
- Workshops & Conferences

#### **Spoken Tutorial :**

The National Mission on Education through Information and Communication Technologies (ICT), established by the Ministry of Education, formerly the Ministry of Human Resources and Development, Government of India, is the source of funding for the Spoken Tutorial project.

A multi-award-winning instructional material platform is Speaking Tutorial. Here, one can independently learn about different Free and Open Source Software. Anyone with a computer and a desire to learn can take our self-paced, multilingual courses from anywhere at any time in a language of their choice. The CC BY SA licence governs the use of all content posted on this website.

#### **Virtual Labs :**

- The National Mission on Education through Information and Communication Technologies is the umbrella organization for the Ministry of Human Resource Development (MHRD), the Government of India initiative known as the Virtual Laboratories project (NMEICT). IIT Delhi is the coordinating institute for this partnership initiative, which has twelve member institutes. A paradigm change has occurred in ICT-based education. This kind of initiative has just recently been applied to remote experiments. Over 100 Virtual Laboratories were created for remote operation and viewing as part of the Virtual Labs initiative, each of which had roughly 700 web-enabled experiments. The projects' target recipients are:
- All Science and Engineering College students and faculty who lack access to quality lab facilities and/or equipment.
- High school pupils, whose curiosity will be aroused and perhaps inspire them to pursue higher education,

- Diverse engineering colleges can use the information and associated teaching resources. Researchers from various institutions can collaborate and exchange resources.

For conducting experiments at user premises, Virtual Laboratories don't require any additional infrastructure configuration. The simulation-based investigations are accessible online from a distance.

AICTE Internships assists organisations in finding the greatest interns throughout all of India and Indian students in finding internships they enjoy.

### **National Educational Alliance for Technology :**

As a public-private partnership model between the government (via its implementing body AICTE) and the education technology companies of India, the MoE has launched the National Educational Alliance for Technology (NEAT). Companies are asked to present their goods on a national portal created for learners through an open invitation and screening process, and learners may purchase them depending on their needs.

NEAT's mission is to provide students with easy access to the top technical products in educational pedagogy on a single platform. Artificial intelligence-based technology products for individualized learning or e-content in specialized fields with highly marketable talents would be found and showcased on the portal.

Also, the programme offers free seats to current students in higher education from socially disadvantaged groups. The NEAT site would be used to distribute free seats, using the information on students given by educational institutions. The portal will only be introduced during the initial phase in AICTE-approved Government Institutions in India.

### **University Enterprise Resource Planning Samarth :**

Under the National Mission on Education through Information and Communication Technology, NMEICT-II (now NMEICT-III) scheme, Project Samarth, sponsored by the Ministry of Education, was launched by the Institute of Informatics and Communication (IIC) Research Lab, University of Delhi in 2019 for the benefit of Universities and other Higher Education Institutions (HEIs) in India. Under the project, Samarth eGov Suite, an open-source and open standards-enabled evolutionary process automation engine, is made available to Universities and HEIs for use. The project offers a variety of digital tools that are built into an online platform of best practices for effective resource planning and management, process and service improvement, and good governance in higher education...

The Samarth e-governance platform seamlessly combines the delivery of education with technology. It was specifically designed for Higher Education Institutions (HEIs) in the nation and enables them to implement a digital framework for the planning, management, delivery, and monitoring of services for students, staff, and other stakeholders. It meets the needs of HEIs and Universities by introducing 9 packages that combine more than 40 modules onto a single platform. The modules assist Colleges in streamlining their repository of records, which includes information about admissions, exams, employee and leave information, payroll, and administrative data, among other things.



They give an integrated system of records and data that was created following rigorous research and comprehension of University policies and procedures. Also, the modules are user-friendly, and ongoing research and feedback are conducted to improve user experience and offer new or more functionality.

A catalyst for the modernization of Higher Education institutions is Samarth E-Gov Suite.

#### **VIDWAN :**

Is India's leading database of profiles of scientists, researchers, and other faculty members employed by top universities and other R&D organisations that engage in both teaching and research. It offers crucial details about the expert's history, contact information, experience, academic papers, qualifications, and accomplishments, among other things. With funding from the National Mission on Education through ICT, the Information and Library Network Centre (INFLIBNET) created and maintains the database (NME-ICT). The database will help choose expert panels for committees and task forces that have been established by government agencies and ministries for monitoring and assessment reasons.

#### **IRINS :**

The Information and Library Network (INFLIBNET) Center's web-based Research Information Management (RIM) service. The portal enables academic, R&D organisations, faculty members, and scientists, and provides an opportunity to form a scholarly network by collecting, curating, and showcasing scholarly communication activities. The academic and R&D organizations in India have access to the IRINS for free as software-as-a-service.

The IRINS would support the integration of the current research management systems, including the human resources system, course management system, grant management system, institutional repository, free and paid citation databases, academic publishers, etc. For consuming scholarly publications from diverse sources, it has merged with academic identities such as ORCID ID, Scopus ID, Research ID, Microsoft Academic ID, and Google Scholar ID.

#### **ShodhShuddhi :**

- The Ministry of Education, Government of India, has started a programme called "ShodhShuddhi" that provides access to plagiarism detection software (PDS) to all universities and institutions in India starting on September 1, 2019, based on the recommendation of the Sub-Committee, National Steering Committee (NSC) of e-ShodhSindhu. There are over 1000 institutions listed, including
- Central Universities
- State Universities
- Deemed to be University
- Private Universities
- Centrally funded Technical Institutions(CFTIs)
- Inter-University Centre (IUCs) of UGC :

All users of universities and intuitions in the nation will have access to the Original (formerly Urkund) web-based plagiarism detection software system as part of this programme. On September 21, 2019, the former minister of education (formerly MHRD) officially inaugurated this programme...

### **Academic Banks of Credits :**

The National Academic Depository (NAD), which serves as the foundation of ABC and holds the students' academic records, served as a model for the creation of the Academic Bank of Credits (i.e. storehouse of academic awards). Even though ABC allows for registration and the beginning of credit transfer, academic institutions use the NAD Platform to handle the completion of award records, certificate issues, and credit redemption. Academic Institutions are the owners of academic awards, hence they are required to register with ABC through NAD.

### **Conclusion :**

The Indian government has taken initiatives to implement and use Information communication technology in the field of Education and shares knowledge through various academic tools and increase the quality of research and improve the teaching-learning process, and try to provide resources free of cost.

### **References :**

- URL: <http://www.punjabiversity.ac.in/Pages/Images/Forms/NMEICT.pdf> Fetched: 2/28/2023 9:50:34 AM
- URL: <https://irins.org/> Fetched: 2/26/2020 10:10:38 AM
- URL: [https://www.emmrccalicut.org/about\\_NMEICT.php](https://www.emmrccalicut.org/about_NMEICT.php) Fetched: 2/25/2023 11:30 AM
- URL: <https://testbook.com/question-answer/nmeict-is-an-acronym-for--5efb4cd6d948c10d0c3c7ab0> Fetched: 2/25/2023 11:45 AM
- URL: <https://testbook.com/question-answer/nmeict-stands-for--5fbd1fa82d7cce5840c09fd3> Fetched: 2/26/2023 12:04 AM
- URL: <https://swayam.inflibnet.ac.in/> Fetched: 12/1/2020 12:47:31 PM
- URL: <https://www.ndtv.com/education/ugc-invites-institutes-academics-develop-online-courses-for-swa...> Fetched: 2/28/2023 12:32:33 PM
- URL: <https://journalsofindia.com/national-mission-on-education-through-ict/> Fetched: 2/28/2023 12:44:41 PM
- URL: <https://ess.inflibnet.ac.in/> Fetched: 2/28/2023 11:41:35 PM
- URL: <https://ess.inflibnet.ac.in/about.php> Fetched: 5/28/2020 12:58:38 PM
- URL: <https://fossee.in/about> Fetched: 2/28/2023 1:29:11 PM
- URL: <https://www.uniraj.ac.in/CentralLib/index.html> Fetched: 2/28/2023 2:30:38 PM