

Electronic (Digital) Resources for Engineering Education: Overview

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ABSTRACT

The Article describes the Electronic, Digital Resources, The Academic and research Community largely depending on electronic information sources. Information playing a vital role in the present knowledge society now a day's about three lakh journals is available deferent disciplines in online. Information Communication Technology (ICT) is being increased use in teaching and learning process for spreading, sharing and retrieving knowledge.

Keywords: E-Resources, Digital Libraries

1. INTRODUCTION

In the 1960's growth of Computers based bibliographical resources are being increased and influenced library collection in 1980 the development of online and CD –ROM data bases took place the World Wide Web appeared in the early 1990 s and created rapid change in the use of accessing information.

The Modern Electronic, Digital resources that are coming out now days in the form of CD ROMs may act internal as well as external resources in the network environment. The required information is accessible electronically through communication networks on the user's desktop computers through the internet.

2. Electronic/Digital Resources:

Databases, Books, Journals, News papers, Magazines, Archives Project reports, Thesis, Research papers and Manuscripts in the form of Digital or Electronic

- Electronic Journals
- E- Books

List of Major and Popular Electronic Databases (Digital Libraries)

IEEE	100+
J- Gate Engineering and Technology	Engineering 3500+
EBSCO	For management and Sciences
ASME	For mechanical engineering

ACME	Computer science
SPRINGER	168000 e-Books
ELSEVER	2500,3000 e-books
DOAJ (open Access)	More than 9351Journals
MIT open Courseware	Open course materials

The IEEE- Institute of Electronics Electrical Engineering world's largest and popular professional Association in the field of Technical Education more than 400,000members in chapter around the world.

IEEE produces over 30% of the world literature in electrical, Electronics Engineering and Computer science field publishing more than 170journals, 1400+ conference proceedings, 5100+technical Standards.

The IEEE Xplore Digital Library is a powerful resource for discovery of scientific and technical content publishing. IEEE providing web access to more than four million full-Text documents from some of the world most highly cited publications in the Electrical Electronics, and Computer Science Engineering more than two million documents in HTML format Approximately 20000 new documents added in Xplore every month.

The Directory of Open Access Journals (DOAJ) list s more than 10000 open access journals in multiple disciplines accessing freely. The revolutionary changes in the open access movement in information and knowledge sharing.

Elsevier 400000 Articles publishing annually, 2500 Journals, 13million Archives documents, 3000 e-books available. One of the popular databases Science direct publishing through Elsevier.

Springer more than 168000 titles are available e- books 24 subject collections publishing peer reviewed collection.

The DOAJ the Directory of Open Access Journals was launched in 2003 at Lund University Sweden with 300 open access journals today contains 9351open Access Journals covering all areas of Science and Technology, Humanities, Medicine and Social Sciences. The DOAJ is to increase the increase the visibility and ease of use of open access scientific and scholarly journals

3. Teaching Aids -Connecting with technology

Institutions are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number of educational tools and resources and subject-matter experts over the internet.

Teachers are using online networks and social media to connect with other schools and peers who can help them adapt their teaching practices to make the most of the digital tools.

Students are using digital technologies to connect with other students across the country and across the world and to engage in self-directed learning in areas of personal interest and expertise.

Institutions are forming stronger connections with schools using digital services like social networks, websites, and online surveys. Many of us use technology to connect to information and learning whenever and wherever we choose.

The digital environment is transforming teaching and learning in our colleges. We are committed to taking full advantage of this opportunity to help our colleges become world leaders in digital education systems through changes to their infrastructure, practices, and pedagogy.

NPTEL:

The National Programme on Technology Enhanced Learning (NPTEL) was initiated by

The Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc)Bangalore in 1999 through a joint workshop organized by IIT Madras with participation From four other IITs, four Indian Institutes of Management (IIMs), industry and Government officials and Carnegie Mellon University, Pittsburgh, USA. The workshop proposed four major initiatives on digital library, core curricula or core courses Development on the web, joint Ph. D. programmes using distance education and a virtual University.

The core curriculum development was later approved under the NPTEL Programme and funded by the Ministry of Human Resource Development in 2003 from a total budget of 20.5 crores of Indian rupees for the creation of 120 web based course Supplements, 115 video courses and encapsulation/conversion of existing 110 video Courses. Each web course developed comprises of supplementary learning materials for 40 hours and video courses contain approximately 40 one-hour lectures per course. The (115) new video courses were prepared in a broadcast format and are currently telecast Through the Eklavya channel made available by the MHRD exclusively for this purpose. In NPTEL Phase I, 110 courses with approximately 4800 one hour lectures were developed. Apart from the well known and popular Open Courseware (OCW) Initiative by the Massachusetts Institute of Technology, USA , which has provided access to about 800 video hours, there are no open resources with so many lecture-hours of video Courses. In contrast to OCW, this showcases available MIT educational resources under open resources, NPTEL is a curriculum development exercise in electronic form with the specific objective of improving the quality of engineering education in India Through distance mode.

The contents can, of course, be used freely by anyone anywhere In the world with a similar academic programme.

MOOCS: Massive Open Online Courses open access via the web traditional course materials such as files and lectures and videos moocs provide integrative user forums to support community integration among the students.

4. Conclusion:

Libraries have been exploring the easy methods to adopting technologies to serving the cost free and more accessible information resources in the educational institutions, the internet and World Wide Web playing a pivotal role in the communication and knowledge society. The open access resources, information learning aids could help modernizing teaching of process learning .Electronic Journals access benefits of full text searching and down loading the articles.

5. REFERENCES

- [1]. Lingaiah,Vuppala (2016) use of E-Shodh Sindhu resources by research scholars and faculty members in IGM Library University of Hyderabad, ISBN: 978-93-84192-08-02.
- [2]. Muragan, K (2015) Utilization of E-resources by faculty and students of Universal College of engineering and Technology .The Journal of Library Advancement, 4(1), 73-76.
- [3]. www.doaj.org
- [4]. www.ieee.org
- [5]. <http://ebooks.asmedigitalcollection.asme.org/browsebooks.aspx#Year>
- [6]. https://en.wikipedia.org/wiki/Massive_open_online_course
- [7]. Bhaskaran, C. (2009). An approach on e-resources access through the consortium in India: problems and prospects. University news, 47 (36), Sept 7-13.
- [8]. Chakravarthy, r.,& Singh, S. (2005). E-resource for Indian Universities: New initiatives SRELS Journal of Information Management 42(1):57-73
- [9]. Francis A.T (2005) Library consortia model for country wide access of electronic journals and databases, 3rd International CALIBER-2005, Cochin, 2-4 February, pp497-504.