Impact of UGC Infonet Digital Library Consortium to Academic Community : A Case Study of The Maharaja Sayajirao University of Baroda

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Abstract

Considering the impact of IT and ICT, E-Resources are found supplements and compliments to Library resources. E-Journals valued to the research activity has accelerated usage of the research material in academic libraries. The present study focuses on the usage impact of E-Resources accessible through UGC Infonet Digital Library Consortium on the campus of The Maharaja Sayajirao University of Baroda.

Keywords: UGC-Infonet Digital Library Consortia, Electronic Journals, Uses Patterns

1. Introduction

One of the major developments in the field of LIS in the past two decades is the advent and spread of electronic sources (EIS), services and networks mainly as a result of development in ICT. EIS provides access to information that might be restricted to the users because of geographical locations and financial crunch. They provide recent information as they are regularly updated. Effective use of EIS has a great impact on the quality of research output in any organization. To keep pace with the changing environment, The Maharaja Sayajirao University of Baroda (MSUB) had laid down a fibre optics of 26 kms on its scattered six campuses with more than 2500 nodes on the campus to facilitate the academic fraternity

The University Library of The Maharaja Sayajirao University of Baroda was established on 1st May 1950 with a core collection of 25,000 books belonging to the two State Libraries (Huzur Political Office and Secretariat Library). University Library System comprises of the main University Library i.e. Smt. Hansa Mehta Library at its apex and 14 constituent Libraries. having a collection of almost 7.5 lacs documents, more than 900 print journals in at least 85 subject areas.. Library caters to the need of more than 30,000 active users comprising of teachers, research scholars, postgraduates and undergraduates too.

2. ICT infrastructure at MSU Campus

Technology Promotion Trust (TPT) by the alumni of The Maharaja Sayajirao University of Baroda at USA has facilitated intranet connectivity across the six scattered campus in the University

Our University has been fortunate to be identified in the first 50 Universities by the UGC under the UGC Infonet project for V-SAT connectivity through ERNET bandwidth of 2 mbps over and above this, on the campus, 4 mbps bandwidth of TPT is also available for effective information communication across the campus.. More than 216 kms of Structured Cabling (Copper) for connecting Computers @ 100 MBPS , connecting over 85 Departments and Institutes, Structured Cabling for over 2500 Nodes, Network Logically Divided into 5 Segments based on Geography (HML, UO, Medical Campus, Technology and Computer

Center) , 24 x 7 Internet Services (2 MBPS + 4 MBPS) , Linux based Active Firewall, Centralized Worms (Virus) Detection, Total and Per department bandwidth monitoring (MRTG), Per IP Bandwidth Usage Monitoring (Squid Logs Analyzer), Web based Online Network Monitoring

2.1 IT infrastructure at Smt. Hansa Mehta Library (University Library)

The University Library is equipped with the following infrastructure of computers, peripherals and network facilities.

Servers

Server : Three
FISC-CDH Mirror Server : One
Desktops & Nodes : Sixty
ASK Proxima C170 LCD Projector

Peripherals :

Laser Printers	: 9
InkJet Printers	: 2
Dot Matrix Printers	: 7
Flatbed Scanner	: 1
Barcode Printers	: 3
Barcode Scanners	: 9

3. E-Resources

Information and communications technology has a major impact on materials for research. It is changing the shape both of primary resources like texts, images and data and secondary resources like indexing, abstracts etc. Now web based electronic resources have become most popular tools for academic research. It is because e-resources are an up-to-date source of information and they can be accessed from any computer, which is connected to the campus network and the Internet. Besides these e-resources support -searching capabilities, timely access and other unique features like links to related items, reference linking etc.

3.1 E-Resources subscribed in Smt. Hansa Mehta Library

MSU is subscribing to following e-resources besides the e-resoucres which is being given under UGC INFONET Digital Library Consortium and INDEST consortium

(a) Business Source Premier (Full text online databases of EBSCO)
(b) Academic Search Premier (Full text online databases of EBSCO)
(c) Wilson Social Science Abstracts
(d) EconLit
(e) ERIC
(f) CABSAC
(g) IBID
(h) PROWESS (CMIE)
(i) Capitaline Plus

3.2 E-Resources through INDEST Consortium

INDEST Consortium, Indian National Digital Library in Engineering Science and Technology, has been established by the Ministry of Human Resources Development (MHRD) , Government of India. MHRD provides funds required for providing differential access to electronic resources subscribed for the consortium to the core members, this ambitious initiative and its benefits are not only confined to its core member institutes but also being extended to all educational institutions under its open-ended propositions. Under INDEST consortium Online access is provided to IEEE / IEE Electronic Library (IEL), ASCE and ASME to our University.

3.3 E-Resources Under UGC-Infonet Consortium

With globalization of education and competitive research the demand for the journals has increased over the years. Due to paucity of funds, libraries have been forced to discontinue the scholarly

journals, which has great impact on the research output. In order to provide the current literature to academia, UGC has initiated the UGC-Infonet Digital Library Consortium which was formally launched in December, 2003 has proved to be a boon to higher education system in the country.

The Consortium provides current as well as archival access to more than 5000 core and peer-reviewed journals and nine bibliographic databases from 23 publishers and aggregators in different disciplines. The programme has been implemented in phased manner. In the first phase that began in 2004, access to e-resources was provided to 50 universities who had Internet connectivity under the UGC-Infonet Connectivity programme of the UGC. In the second phase, 50 more universities were added to the programme in the year 2005. So far 120 Universities out of 171 that come under the purview of UGC, have been provided differential access to subscribed e-resources. These e-resources covers almost all subject disciplines including arts, humanities, social sciences, physical sciences, chemical Sciences, life sciences, computer sciences, mathematics and statistics, etc. The programme is wholly funded by the UGC and executed by INFLIBNET (Information and Library Network) Centre, Ahmedabad.

4. Usage of e-resources

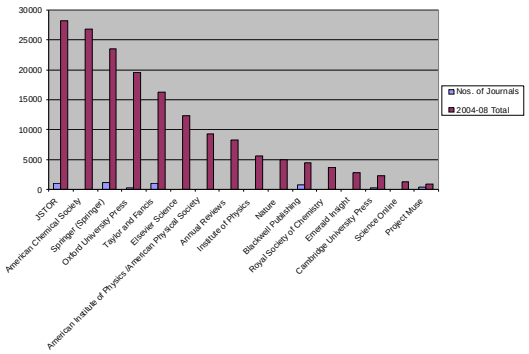
This paper evaluates the usage of E-resources available under UGC-Infonet Digital Library Consortium accessible in MSU campus and its impact on research output.

Internet is widely used in all walks of life and Electronic Information resources has a special value in today's information age. University Grant Commission spends a huge amount on accessing the electronic resources and disseminating them to academic community through UGC-Infonet Digital Library Consortium. It is very legitimate on the part of the librarians to know whether the academic community is using these electronic journals optimally.

The below mentioned table depicts total no. of journal articles downloaded from various publishers site from the year 2004 – 2008 in MSU campus. The data shows the usage in terms of downloads. Although data for ACS is available for 2004 only, the no. of downloads is significant compared to the downloads for JSTOR for all four years which is merely an archival collection.

Statement Showing Total Download of Journal Articles

Sr. No.	Name of Publishers	No. of Journals	2004-08
1	JSTOR	1046	28177
2	American Chemical Society	35	26845
3	Springer (Springer)	1200	23471
4	Oxford University Press	202	19517
5	Taylor and Francis	1076	16229
6	Elsevier Science	34	12346
7	AIP / APS	28	9279
8	Annual Reviews	33	8231
9	Institute of Physics	46	5648
10	Nature	1	4964
11	Blackwell Publishing	797	4468
12	Royal Society of Chemistry	29	3750
13	Emerald Insight	29	2837
14	Cambridge University Press	224	2339
15	Science Online	1	1296
16	Project Muse	389	833
	Total	5170	170230

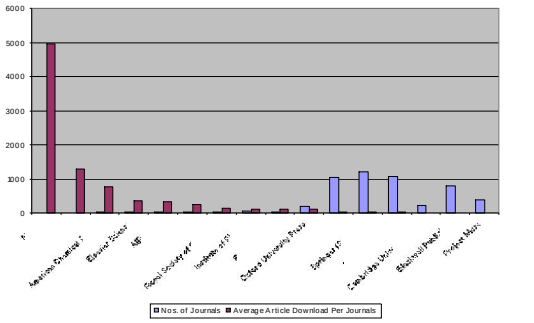


The above figure reveals that the usage in the Science and Technology journal (especially in Physics and Chemistry) as it is available in electronic format depicts optimum usage. On the other hand, Social Sciences and Humanities journals, are low in usage as compared to Science and Technology. Although situation regarding archival collection (JSTOR) downloads reveal a remarkable usage.

Total download of ACS alone for a single year(2004) is 26,845 reveals that researchers belonging to Science and Technology are making optimum use of it. This depicts the adaptability of ICT among the Scientists having higher ratio as compared to Social Scientists and Humanists in the initial year.(Data for ACS is not available for the years other than 2004 which was the initial year in which Consortium was made available to this University.

Statement Showing Average Article Download Per Journals

Sr. No	Name of Publishers	Nos. of Journals	Average Article Download Per Journals
1	Nature	1	4964
2	Science Online	1	1296
3	American Chemical Society	35	767
4	Elsevier Science	34	363.11
5	A I P / APS	28	331.39
6	Annual Reviews	33	249.42
7	Royal Society of Chemistry	29	129.31
8	Institute of Physics	46	122.78
9	Emerald Insight	29	97.83
10	Oxford University Press	202	96.62
11	JSTOR	1046	26.94
12	Springer (Springer)	1200	19.55
13	Taylor and Francis	1076	15.08
14	Cambridge University Press	224	10.44
15	Blackwell Publishing	797	5.6
	Total	5170	



Out of 16 publishers, top eight publishers are of Science and Technology, which show the highest downloads per journal though the no. of journals contained are few. Second in the lead is OUP and JSTOR (dealing in archival collection of Social Sciences and Humanities) is not much far behind.

Although the no.of journal titles covered JSTOR, Springer and Taylor and Francis is significantly high, average downloads portrays an incommensurate situation.

5. Impact of e-resources on Research output

Consortium has revolutionized the access of scholarly information in form of e-resources to all without any discrimination. Availability of E-resources have played major role in increase in research output globally. According to Web of Science, research output has almost doubled in India since the e-resources are easily accessible. This is more so, after the Consortium has brought about access to latest research published in peer reviewed journals within easy reach of researchers.

6. Research Output in India

Below table shows the research output in India for the last seven years. It is observed that research n India has doubled in just seven years. It can be said that emergence of consortiums have accelerated and escalated the research activity in India. Below table proves that research has doubled in short span of seven years and the entire credit goes to Consortia efforts.

Web of Science	
2001	**20746**
2002	22625
2003	24941
2004	27071
2005	30211
2006	34729
2007	**40125**

7. Research output of The Maharaja Sayajirao University of Baroda

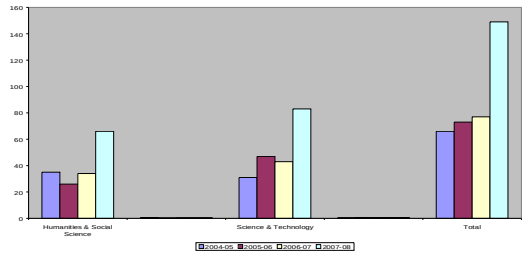
An attempt is made to study the research trend in The Maharaja Sayajirao University of Baroda. According to statistics provided on INFLIBNET website, this University is ranked 26th among other Indian Universities as far as downloads in the year 2007 are concerned. After the access of e-resources through UGC Infonet Digital Library Consortium, the research output has increased significantly due to increase in awareness, infrastructure availability and adaptability by Scientists as compared to Social Scientists and Humanists.

This University was among the first 50 universities who had access to consortium resources. Hence this is revealed in the statistics taken into account from 2004 to 2008. Availability of e-resources through UGC Infonet Consortium has shown a significant increase in the no. of Ph.Ds awarded in the field of Social Sciences & Humanities and pure Science & Applied Sciences.

This University was fortunate enough to be beneficiary of access to Consortium from 2004. Initial year has not made any impact on the usage of resources available through Consortium. But later on from 2005 onwards, the increasing awareness in the use has shown remarkable increase.

Statement showing Ph.D. awarded in The M S University of Baroda

Year	Humanities & Social Science		Science & Technology		Total
2004-05	35	53%	31	47%	66
2005-06	26	36%	47	64%	73
2006-07	34	44%	43	56%	77
2007-08	66	45%	83	55%	149



Above figure shows an upward trend in research output in the University especially in Pure Sciences. The major factor affecting this upward trend is

seen after the availability of e-journals through UGC Infonet Digital Library Consortium. There is a drastic rise in the year

2007-08, i.e. 149 researches from the University out which 83 Ph.Ds are from Science and Technology alone. This outcome is due to the following initiatives.

- Organization of an awareness Programme
- Posters from INFLIBNET were sent to all Departments for publicity of e-journals available through Consortium
- Circulars and leaflets were pasted in prominent places in the Departments and their computer labs for information on e-journals available through Consortium.
- Personal counseling with library's potential and active users for effective and optimal use
- Link to e-journals is provided on Library's website. URL : www.hmlibrary.ac.in
- Training sessions were organized for the use of specific resource in a subject area. e.g. Scifinder
- Personal visits to Departments to educate the researchers and Faculty members

8. Suggestions

- It has been observed that when enormous e-resources are accessible, it is the moral duty of we LIS professionals to prevent its misuse.
- To get more comprehensive data on the usage of the e-resources at the specific IP address, it is recommended to introduce authentication by way of using 12 digit SOUL membership code as the validation to have access on campus as well as off campus. This could be feasible, if it is accepted by publishers covered under INDEST or UGC-Info net Consortium instead of username and password.
- Such a mechanism need to be evolved to have a comprehensive data on the true usage of the academic fraternity in the universities in the country as the national resources are being utilized. We must have our accountability on the true usage of the funds made available in persuasion of our professional excellence

9. Conclusion

Above facts prove that personal visits, training workshops, inviting feedbacks, are issues which give a heavy impact on the use, however traditional they seem to be. Usage statistics, Surveys and feedback always remain effective tools to measure the usage.

To enhance the use of e-resources, more awareness programmes should be organized to indoctrinate them about the facilities and benefits available with electronic format as compared to print.

A good infrastructure remains to be an encouraging factor for the use of e-resources

The usage of e-resources by the pure scientists is found quite satisfactory.

Usage of Electronic journals is found greater in the campus in spite of the low bandwidth of the University till recent past.

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