

USAGE OF E-RESOURCES UNDER UGC-INFONET IN SAMBALPUR UNIVERSITY LIBRARY: AN IP-LEVEL ANALYSIS

Sushanta Kumar Pathy*, Rajendra Kumar Thaty**, B.K. Choudhury***

Abstract Based on an IP-level analysis of publisher-wise usage-statistics of e-resources subscribed under UGC- INFONET, downloaded for the five-year period from 2005 to 2009, the attempts to examine the patterns by which e-journals are accessed by the Faculty, Research Scholars and M.Phil Students of Sambalpur University. The study also discusses the utilization of e-resources with respect to different disciplines. It also talks about UGC-Infonet and its objectives, and find ways and means for a better usage of e-resources and its management. The paper guides to improve the underutilized e-resources and suggest measures for future subscription and discontinuity of e-resources.

Keyword: UGC Infonet; E-Journals; E-Resources; Usage Study; IP-level Analysis, Sambalpur University, India

INTRODUCTION

Sambalpur University and Ugc-Infonet

Established in 1967, Sambalpur University is one of the oldest Universities of Orissa. The University Library system consists of the Central Library (named as Professor Bhubaneswar Behera Central Library or BBCL in short) and 22 subject specific Seminar Libraries in the PG Departments. These Libraries which were mainly aimed at serving the academic community of the teaching departments of the University has now become the main Centres of study and research for the academic community of this University. Nearly 400 to 500 students, teachers and others visit the Central Library daily for reference and issue of books.

Sambalpur University is one of the 50 universities identified in the Phase II by the INFLIBNET Centre for providing access to scholarly E-Journals through UGC-INFONET E-Journal Consortium. Though the E-Journal access to universities is intended to be provided from 1st January 2004, this University started receiving E-Journals from January 2005. At present, the University research community is able to access over 4300+ e-journals at the e-journal facility at BBCL.

Ugc-Infonet

Realizing the need for a common mechanism for access to scholarly information, University Grants Commission (UGC) set the priority for providing access to scholarly information for the research and academic community by supplementing

the existing collection in the individual universities. Under this initiative UGC is modernizing the University Campus with state-of-the-art campus wide network and setting up its own nation-wide communication network named 'UGC-Infonet'. The scheme was inaugurated by the then Hon'ble Prime Minister of India, Shri Atal Bihari Vajpayee with the commencement of UGC's Golden Jubilee celebrations on 25th December, 2002.

UGC-Infonet is an ambitious programme of UGC to interlink all the Universities in the country with state-of-art technology. The Network is being switched to BSNL backbone w.e.f 1st April 2010 and renamed as UGC Infonet 2.0. ON the new scheme 10 Mbps(1:1) Leased line is being established in 180 plus universities preferably by using Fiber to provide Internet Services. INFLIBNET is responsible for executing and monitoring the entire project. The UGC-INFONET mainly provides Internet bandwidth, a pre-requisite for delivery of scholarly content subscribed through the UGC-INFONET Digital Library Consortium. The scheme has now been extended to 200 Universities and 6 Inter-University Centres of the UGC.

Sambalpur University also upgraded under the UGC-Infonet 2.0 and commissioned 10Mbps (1:1) leased line on Dec 29 2010 from the old BBVSAT 256 Kbps commissioned by ERNET.

Main Features of Ugc-Infonet

Important features of UGC-Infonet as specified in INFLIBNET website (as on 22.11.2011) are as follows:

* Sr. Lib. & Inf. Asst, IIT Bhubaneswar, Bhubaneswar, Odisha, India. Email: pathysushanta@gmail.com

** Chief Librarian, Sambalpur University Jyotivihar, Odisha, India. Email: pitam97@gmail.com

* Ex-Professor of Lib. Sc Sambalpur University Jyotivihar, Odisha, India. Email: bkc_123@rediffmail.com

- i. Serves as a vehicle for distance learning and facilitates spread of quality education all over the country; Scalable Architecture to grow from Universities to affiliated Colleges
- ii. Facilitates delivery of education material including electronic journals and bibliographic databases to the remotest areas of the nation
- iii. Serves as a resource for researchers and scholars for tapping the most up-to-date information
- iv. Act as a medium for collaboration among teachers and students, not only within the country but also all over the world
- v. Facilitates Intranet infrastructure for beneficiary university; and
- vi. Serve as a channel for globalization of education and facilitates the universities in marketing their courses and project their R & D activities. In order to meet the objectives, the scope of the work assigned to the ISP as per the MoU is as follows
 - a, Designing network infrastructure for the UGC-INFONET Connectivity Programme;
 - b, Providing space to the universities/UGC for hosting their web sites
 - c, Installing equipment and establishing Internet connectivity at the universities
 - d. Training of personnel from universities to manage and maintain their networks and connectivity over ISP's backbone in collaboration with INFLIBNET; and
- vii. Providing mailing and other services to the universities and the UGC offices

SIGNIFICANCE OF THE STUDY

The present study "Usage of E-journals under UGC-Infonet in Sambalpur University Library: An IP-level analysis" attempts to study usage of users towards the use of e-journals access facility at Sambalpur University Library. The fact that the users, who were so accustomed to the printed format, have been exposed to the e-journals only in the recent past, significantly increases the importance of the study.

Objectives

The objectives of the present study are:

- To identify the use, acceptance and impact of e-journals;
- To know the usage of e-journals sources;
- To ascertain the need for user orientation programme in accessing e-Journals;

- To suggest the ways and means for effective use of the e-journals facility;
- To suggest the renewal and withdrawal of e-journals subscription;
- To suggest improvement of infrastructure for high usage.

Scope and Limitation

The scope of the study is limited only to the resources available to the users in the Sambalpur University Library of Odisha. It covers only the e-journals subscribed to by the Sambalpur University Library through the UGC-INFONET E-Journal Consortium. The study is confined to the IP-level usage statistics of E-Journals (downloaded articles) for the period 2005 to 2009 (sources INFLIBNET).

Review of Literature

Since the beginning of UGC-Infonet, this provides a large array of resources related to various disciplines and has succeeded fulfilling the requirements of the faculty and research scholars. The recent review study of literature carried out by the professionals justified the need and necessity of this kind of consortium for academic development.

Study conducted by Bhatt (2010) through questionnaire method in History and Political Science departments of University of Delhi clearly reflect the current scenario of e-resources awareness and usage pattern of faculty members and research scholars.

Maharana, Sethi and Behera (2010) in their survey of P.G Dept. of Business Administration, in Sambalpur University concluded that on the use of internet and e-resources reported that all users use internet as a source of information.

Khan and Ahmad (2009) in their survey to examine the comparative use of e-journals by research scholars of Aligarh Muslim University and Banaras Hindu University reveals that most of the research scholars are aware of e-journals and good number of research scholars are consulting not only for research purpose but also for study, writing manuscripts and papers, career development and to update their knowledge.

Bhatt, Jyoti and Joshi, Nilesh (2009) opined that Usage of Electronic journals is found greater in the Baroda University campus in spite of the low bandwidth.

UGC-Infonet e-journals are seen as having a positive impact and the study has enabled the respondents to express their satisfaction and their aspirations for improvements, Madhusudhan M (2008) in his study conducted in Delhi University opined.

Table: 1. Ranking of E-Resources

SN	Publisher/ Sources	No of articles downloaded (2005-2009)											
		2005		2006		2007		2008		2009		G. Total	
		DA	RN	DA	RN	DA	RN	DA	RN	DA	RN	DA	RN
1	ACS	982	2	3409	1	5185	1	4376	1	6188	1	20140	1
2	AIP-APS	237	4	495	6	293	8	330	8	53	14	1408	9
3	AR	NA	NA	124	12	263	9	126	12	54	13	567	12
4	Blackwell	2	10	164	10	NA	NA	212	10	175	11	553	14
5	CUP	217	5	124	12	69	12	85	13	62	12	557	13
6	Emerald	NA	NA	225	9	695	6	468	6	4615	2	6003	4
7	IoP	147	7	125	11	216	10	153	11	218	10	859	11
8	JCCC	NA	NA	NA	NA	NA	NA	69	14	947	7	1016	10
9	JSTOR	1274	1	1877	2	3729	2	2402	2	4016	3	13298	2
10	OUP	176	6	433	7	1757	4	447	7	627	8	3440	6
11	Pr. Muse	NA	NA	259	8	155	11	1268	4	1474	5	3156	8
12	RSC	131	8	1448	3	3211	3	617	5	365	9	5772	5
13	Springer	88	9	1245	4	1280	5	1805	3	2008	4	6426	3
14	TF	896	3	620	5	318	7	306	9	1022	6	3162	7
15	YTD	4356		10459		17172		12667		21824		66478	

**DA- Downloaded Article, RN-Rank No., YTD- Yearly Total Download

A study conducted by Boukacem-Zeghmouri and Schopfel (2008) in French University suggested that monitoring the usage of digital resources gains is becoming increasingly important for acquisition policy and budget decisions.

Murthy (2008) conducted a study regarding usage of UGC-Infonet resources and found that the trend of high use of e-resources by the Indian scholars helped in reducing information gaps between rural and urban privileged, reachable and unreachable frontiers within the country.

Vishala and Bhandi (2007) advocates for a centrally administered consortium approach with innovative features for maximum utilization UGC-Infonet E-resources by the research community.

LIST OF E-RESOURCES OFFERED TO SAMBALPUR UNIVERSITY

1. American Chemical Society (ACS) <http://www.pubs.acs.org/>
2. American Institute of Physics (AIP) <http://www.aip.org/>
3. American Physical Society (APS) <http://www.aps.org/>

4. Annual Reviews (AR) <http://arjournals.annualreviews.org>
5. Blackwell (BLKWL) <http://www.blackwell-synergy.com/>
6. Cambridge Uni. Press (CU) <http://journals.cambridge.org/>
7. Emerald (Emrld) <http://www.emeraldinsight.com/>
8. Institute of Physics (IOP) <http://www.iop.org/EJ/>
9. JCCC <http://www.jccc-ugcinfonet.in/>
10. JSTOR <http://www.jstor.org/>
11. Oxford University Press (OUP) <http://www.oxfordjournals.org/>
12. Project Muse (Pr. Muse) <http://muse.jhu.edu/journals/>
13. Royal Society of Chemistry (RSP) <http://www.rsc.org/>
14. Springer Link <http://www.springerlink.com/>
15. Taylor and Francis (TF) <http://journalsonline.tandf.co.uk>

USAGE BY E-RESOURCES AT BBCL

Sambalpur University Library subscribes to e-journal databases under the UGC INFONET E-Journal Consortium.

The databases cover about 4300 e-journals on various disciplines. Being a phase II University, however, it does not get many of the databases and journals offered to the phase I universities. Most publishers maintain detailed usage statistics of resources made accessible to member universities by them. The publishers provide username and password for accessing the usage statistics for their resources for monitoring purposes. Most publishers provide COUNTER-compliant usages statistics, which is an International standard for measuring the usage of e-resources accessible through various platforms. The usage statistics from various publishers website are downloaded on regular intervals and made accessible to the member universities on INFLIBNET website through an interface called e-RAMS (Electronic Resources Access Management System).

The pattern of use of various databases available at SU under the UGC INFONET programme is very interesting. While the Chemical Science database ACS leads the list with 30.30% of overall usage, the second most used database is JSTOR among Humanities & Social Science with 20%. The third most used database is Springer Links (10%).

The following list shows the ranked list of databases from the most used to the least used along with the number of users using them:

FINDINGS

The above table reveals that American Chemical Society (ACS) is more popular among the Chemistry Faculty & Scholars and is the number one highly usage downloaded source with four consecutive years at Rank No. 1 from 2006 to 2009. It is also the highest downloaded sources among all categories for the entire period of study with total of 20140 articles downloaded during the period 2005-2009. J-STOR is the next highest preferred source of downloading of articles with Rank at No.2 with total of 13298 articles during the period of study and also listed on top during the year 2005 with 1274 download.

From the above table, it is also concluded that Blackwell & Cambridge University of Press (CUP) are the least usage sources of downloading articles at Rank No. 14 &13 with a

Table 2. Publisher wise Usage of E-Resources from 2005 to 2009

S.NO	Publisher/ Sources	No of articles downloaded (2005-2009)										
		2005	2006		2007		2008		2009		G. Total	
		DA	DA	Vol of Increase in %	DA	Vol of Increase in %	DA	Vol of Increase in %	DA	Vol of Increase in %	DA	Average Increase in % overall
1	ACS	982	3409	247.14	5185	51.30	4376	-15.60	6188	41.40	20140	81.06
2	AIP-APS	237	495	108.86	293	-40.80	330	12.62	53	-83.93	1408	-0.81
3	AR	NA	124	NA	263	112.09	126	-52.09	54	-57.14	567	0.94
4	Blackwell	2*	164	NA	NA	NA	212	29.26	175	-17.45	553	5.90
5	CUP	217	124	-42.85	69	-44.35	85	23.18	62	-27.05	557	-22.76
6	Emerald	NA	225	NA	695	208.88	468	-32.66	4615	886.11	6003	354.11
7	IoP	147	125	-14.96	216	72.8	153	-29.16	218	42.48	859	17.79
8	JCCC	NA	NA	NA	NA	NA	69	NA	947	1272.46	1016	1272.46
9	JSTOR	1274	1877	47.33	3729	98.66	2402	-35.58	4016	67.19	13298	44.4
10	OUP	176	433	146.02	1757	305.77	447	-74.55	627	40.26	3440	104.375
11	Pr. Muse	NA	259	NA	155	-40.15	1268	718.06	1474	16.24	3156	231.38
12	RSC	131	1448	1005.34	3211	121.75	617	-80.78	365	-40.84	5772	251.36
13	Springer	88	1245	1314.77	1280	2.81	1805	41.01	2008	11.24	6426	342.45
14	TF	896	620	-30.80	318	-48.70	306	-3.77	1022	233.98	3162	37.67
15	YTD	4356	10459	140.10	17172	64.18	12667	-26.23	21824	72.29	66478	62.58

**DA- Downloaded Article, RN-Rank No., YTD- Yearly Total Download

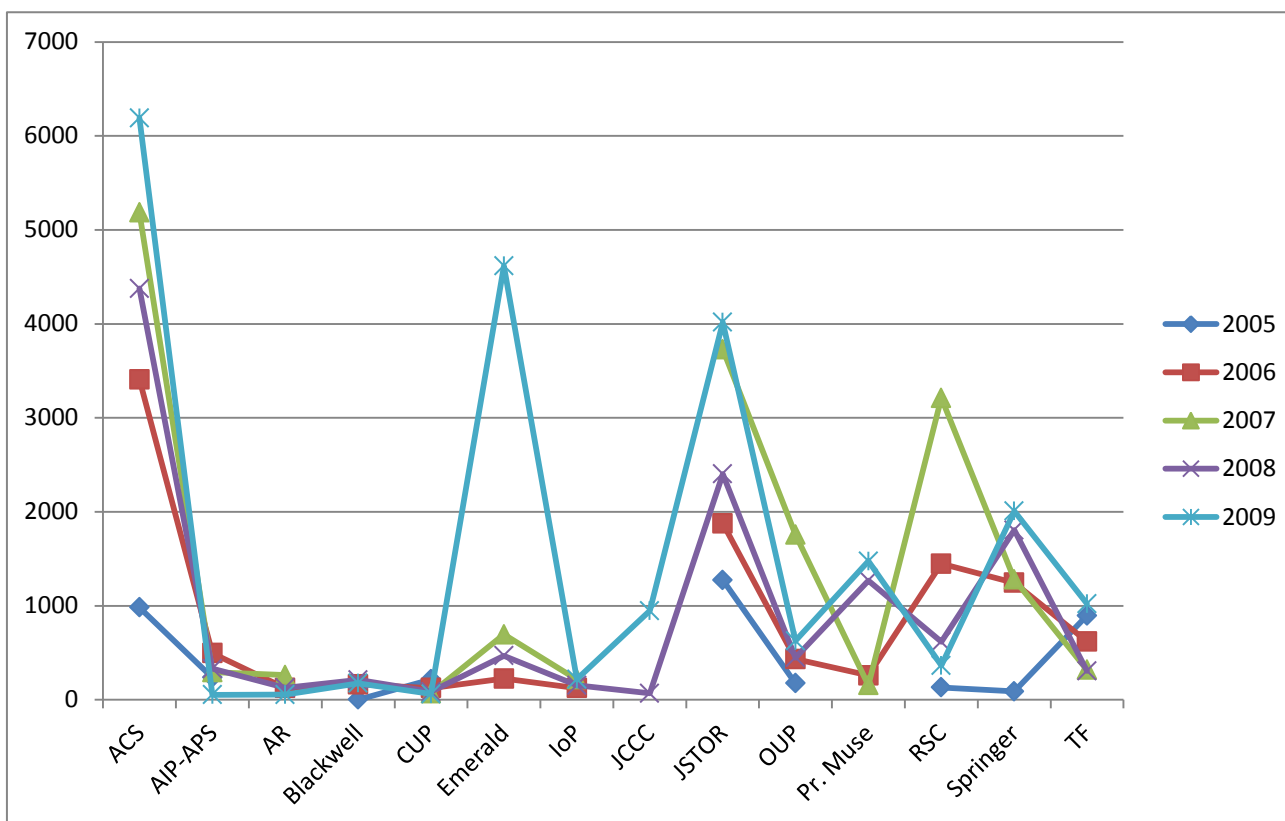


Figure 1: Line Graph of Publisher wise Usage of E-resources from 2005 to 2009

overall total of 553 and 557 respectively during the period of study.

The above statistics shows that a total of 21824 downloads in the year 2009 is highest ever download during this period and 4356 the least download in the year 2005. It reveals that gradually with the increasing awareness of e-journal facility the downloading of articles also increased over the years.

The line graph at figure 1.0 also clearly indicates increase in the usage of e-resources over the years.

The average increase in usage from 2005 to 2009 is 62.58% which is more than the national average of 61.80% as per statistics given in the Annual Report 2009-2010, INFLIBNET, Ahmedabad.

Most Usage in Terms of Disciplines:

Based on the above table, J-STOR, listed at the top with number one preferred source in Social Science and Humanities discipline with a total of 13298 downloads and also hold the number one rank for consecutively four years i.e. 2005 to 2008. However in the year 2009, Emerald with a total of 4615 downloads was the most used source with 4016 downloads in this category.

In the Basic Science disciplines ACS retained number one rank during the entire period of 2005-2009 with a total of 20140 download. It is also found that the lion shares of Basic Science sources come from Chemical Science sources ACS and RSC combined figure is 67.62%.

From the above table it can be pointed out that there are resources which are not utilized properly which needs special attention and e-awareness campaign for better usage and the cause of under utilization.

RECOMMENDATIONS

It is worthwhile to spell out some of the recommendations to improve the E-Journal Access Facility to increase the e-journals usage in brief. These are:

- Subscribe to more number of e-journals as on demand
- E-resource awareness programme for under utilized resources
- Alert service for new e-resources
- Add more number of Computers
- Provide printing facility
- Have a campus-wide network
- Separate Access facility for teachers & Scholars

- h. E-Journal Access from Hostels
- i. E-Journal Access from residence
- j. Training on Usage of E-Journals
- k. More staff to help in accessing E-Journals
 - i. To have 24-hour access on all days
- m. Increase in the speed of access & download
- n. Library website with a user-friendly e-journal interface
- o. Subject-wise listing of e-journals
- p. Separate cubicle for each user
- q. More comfortable sitting facility required

CONCLUSION

The number of e-journals being published grows steadily and one day this would ultimately take us to an era when there would be no journals in the printed medium. The present study indicates growing acceptance of the electronic format. Scientists are increasingly using these new publications and citing them in their research papers. Libraries are serving their role in the research process by providing access through their online catalogs. The move to an electronic format for journals has affected serials management practices in libraries. This study only attempted to examine the usage of E-journals by academic faculty, Research Scholars and M Phil students of the Sambalpur University, Central Library through UGC -INFONET E-Journal Consortium. It is absolutely essential to study the variations in the e-journal usage pattern for different disciplines and of different categories of users belonging to various backgrounds, to be able to design and develop a really excellent e-journal facility catering to the needs of diverse users typical to that of an academic institution like Sambalpur University.

REFERENCES

- Bhatt, R.K. (2010). Use of UGC-Infonet Digital Library Consortium resources by research scholars and faculty members of the University of Delhi in History and Political Science: A study. *Library Management*, 31(4/5), 319-343.
- Boukacem-Zeghmouri, C., & Schopf, J. (2008). On the usage of e-journals in French Universities. *Serials*, 21(2), 121-126.
- INFLIBNET (2010). *Annual Report*, Ahmedabad: INFLIBNET, 45-51.
- UGC Infonet (2011). Retrieved from <http://www.inflibnet.ac.in>.
- Khan, A.M., & Ahmad, N. (2009). Use of e-journals by research scholars at Aligarh Muslim University and Banaras Hindu University. *The Electronic Library*, 27(4), 708-717.
- Madhusudhan, M. (2008). Use of UGC-Infonet e-journals by research scholars and students of the University of Delhi, Delhi: A Study. *Library Hi Tech*, 26 (3), 369-386.
- Sharma, C. (2009). Use and Impact of E-Resources at Guru Gobind Singh Indraprastha University (India): A Case Study. *Electronic Journal of Academic and Special Librarianship*, 10(1)
- Maharana, B., Sethi, B.B., & Behera, S. (2010). Use of Internet and e-resources by the students of business management; A survey of P.G. students of Business Administration. Sambalpur University, India. *International Journal of Library and Information Science*, 2(3), 45-53.
- Vishala, B.K., & Bhandi, M.K. (2007). Availability of library and information science electronics journals through UGC-INFONET project. *Annals of Library and Information Studies*, 53 (2), 65-9.