

Usage Study of UGC-INFONET E-resources at University of Pune

Nagesh Laxman Londhe and Neela J. Deshpande

Jayakar library, University of Pune, Ganesh Khind Road, Pune-411 007

E-mail: nagesh@unipune.ac.in, njdeshpande@unipune.ac.in

ABSTRACT

The paper focuses on the study of usage of e-resources available through UGC-INFONET Digital Library Consortium by University of Pune users. The objective is to find trends in usage of e-resources and which e-resources are used to the maximum. To study the usage trends a usage statistics of 13 full-text databases during 2007-2012 were collected from UGC-INFONET website. The study reveals that usage of e-resources is increasing. More users are getting awareness of e-resources and using e-databases. Users from Chemistry field are more active in using e-databases. Some databases contain very less titles, but the usage of these databases is very high. Subject specific databases are highly used than multi-subject databases. Titles-wise usage study is useful for effective planning and taking important decision on subscription of databases. This usage study is useful for LIS professionals for finding important e-journals and databases for proper implementation of funds.

Keywords: UGC-INFONET consortia, e-resources, usage studies, University of Pune, Jayakar Library

1. INTRODUCTION

Today electronic information (e-information) is available enormously and accessible due to developments in publishing industry and user are preferring e-information due to 24x7 availability at their desk as well as easy flexible search of e-databases. Libraries are spending huge amount of money for subscribing databases such as full-text e-journals, e-books, reference materials and archiving back-sets of journals. Therefore, it becomes important to check usage of e-resources. Librarian conducted this type of studies for print collection for long time using data generated and collected by the library during various transactions. This study may be useful to identify usage pattern, to help digital collection development, and to get additional funds from university authorities.

2. JAYAKAR LIBRARY, UNIVERSITY OF PUNE

Jayakar library is the central library of University of Pune. It was established in January 1950, named in honour of the first Vice-Chancellor Dr M.R. Jayakar. The library presently has 3950 members with a collection of more than four lakhs. The library subscribes 15 e-databases and have access to 25 e-databases through UGC-INFONET Consortia. All resources are accessible in campus through LAN. E-databases accessed in library are mentioned below:

2.1 Databases Subscribed by Library

- (1) *Academic Search Premier*
- (2) *Communication & Mass Media Complete*

- (3) *Manupatra*
- (4) *Lexisnexis*
- (5) *Sage Publication (Online Journals)*
- (6) *PsycArticle*
- (7) *Nature: Physics, Materials, Nanotechnology*
- (8) *IEEE Xplore digital library*
- (9) *LISTA*
- (10) Online individual Journal titles subscribed by library
- (11) *CLA Online*
- (12) *Online Encyclopedia of Library and Information Science*
- (13) *Indian Journals.Com*
- (14) *ProQuest Dissertations & Theses*
- (15) *GeoScience World*

2.2 Databases Available Through UGC-INFONET Consortia

The UGC-Infonet Digital Library Consortium was formally launched in December 2003 by Honourable Dr A.P.J. Abdul Kalam, the President of India soon after providing the internet connectivity to the universities in 2003 under the UGC-INFONET programme. The Consortia provides current as well as archival access to more than 7000 core and peer-reviewed journals, and 10 bibliographic databases

from 26 publishers and aggregators in different disciplines¹. Table 1 shows the list of databases available through UGC-INFONET consortia¹.

Table 1. List of databases available through UGC-INFONET consortia¹

S. No.	E-resource name	Titles
1.	American Chemical Society	37
2.	American Institute of Physics	18
3.	American Physical Society	10
4.	Annual Reviews	33
5.	Cambridge University Press	224
6.	Economic & Political Weekly	1
7.	Emerald	29
8.	Institute of Physics	46
9.	JSTOR	2073
10.	Nature	1
11.	Oxford University Press	206
12.	Portland Press	9
13.	Project Euclid	35
14.	Project Muse	493
15.	Royal Society of Chemistry	29
16.	ScienceDirect (10 Subject Collection)	1036
17.	SIAM	14
18.	Springer Link	1763
19.	Taylor and Francis	1173
20.	Wiley Blackwell Publishing	908
21.	ISID	1
22.	JCCC	1
23.	MathSciNet	1
24.	SciFindernet	1
25.	Web of Science	1

Jayakar Library has developed e-resource portal which lists all e-resources with hyperlink for creating awareness about e-resources. The description of each resource is provided so that user can find whether the resource is useful to them or not.

These e-resources are also classified subject-wise which helps users to know the e-resources available in their respective subject. In addition to this, portal provides link to number of open access e-resources relating to books and periodicals, etc. Library organises series of training programs for training users as well creating awareness (Fig.1).

3. LITERATURE REVIEW

There are number of studies conducted on usage studies and summarised in many earlier studies. However, this study presents the findings of studies mainly on UGC-INFONET e-resource.

Chand & Arora² in their study found that there has been a qualitative increase in overall usage, but use is also dependent on a high-bandwidth connection.

Singh³, *et al.*, revealed that while there was an increase in the usage of the resources of most of the publishers inspite of certain problems of accessibility, resources of some of the publishers were under-utilised.

A study conducted by Bhatt⁴ determined the needs of research scholars and faculty members of University of Delhi in History and Political Science, and finds out how far their information needs are fulfilled by the information resources available through UGC-INFONET Digital Library Consortium.

Walmiki⁵, *et al.*, reveal that comparatively science faculty uses consortium resources more frequently than those belong to Social Sciences and Humanities.

Mukherjee & Kumar⁶ in their study reveal that, there is demand for more e-journals titles although a substantial number of users (61.90 %) are satisfied with the existing model of UGC-INFONET.

Pradhan⁷, *et al.*, revealed that, COUNTER and SUSHI standards have potential to ease the work of maintaining usage statistics. It also gives the implication of SUSHI for creating usage statistics portal at INFLIBNET center.

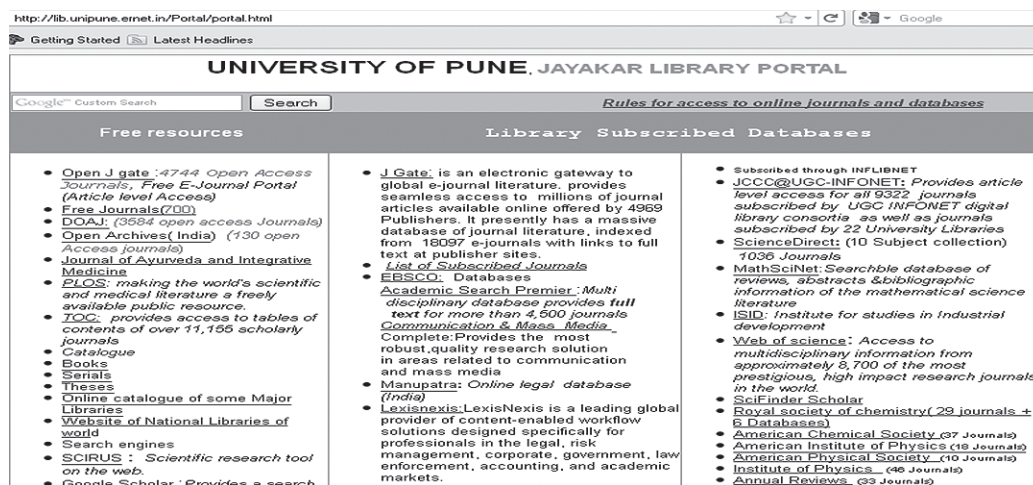


Figure 1. Screenshot of library e-resource portal.

Bhatt & Rana⁸, in their study revealed that academic staff was using many types of e-resources.

Suseela⁹ emphasised the necessity of evaluating the library resources in terms of their quality, cost benefit, and usefulness. It highlighted the application of usage reports by the university library in decision making during renewals/subscriptions.

4. OBJECTIVES

The present study is conducted for the following specific objectives:

- To find number of downloads/views, and
- To find popularity of publisher.

5. SCOPE AND LIMITATIONS

The present study covers usage study of full-text journal databases available through UGC-INFONET consortia having more than 25 titles. The period selected for the study is 2007-2012. Sufficient usage data of *Science Direct* database was not available, therefore it has not been covered in this study.

6. METHODOLOGY

For the present study the usage data of e-resources is collected from e-resources access management system provided by INFLIBNET Centre, Ahmadabad. In case of few databases the complete usage data is not available in this system.

Usage is being collected on regular intervals/as and when available on the publisher's website. The usage statistics are:

- Based on the automated usage reports provided by the publishers on the web
- Counted on the basis of number of full-text downloads or views (both as HTML or PDF) in case of e-journals
- Number of records viewed or searches in case of bibliographic-databases
- For *SciFinder Scholar* counted as the number of activities or SSM activities
- For *JCCC* based on the number of hits.

7. DATA ANALYSIS

The collected data indicates that among 25 databases, except bibliographic-databases, only 14 full-text databases are having more than 25 titles. In this study, 13 databases were selected for study because one full-text database '*ScienceDirect*' is recently subscribed therefore sufficient usage data is not available (Table 2).

Table 2. Selected databases for study

S. No.	E-resource name	Titles subscribed	Discipline
1.	American Chemical Society	37	Chemistry
2.	Royal Society of Chemistry	29	Chemistry
3.	Institute of Physics	46	Physics
4.	Project Euclid	35	Mathematics
5.	Emerald	29	Social Sci. (Lib & Inf. Sci.)
6.	Project Muse	493	Humanities/ Social Sci.
7.	Annual Reviews	33	Multidiscipline databases
8.	Cambridge University Press	224	Multidiscipline databases
9.	JSTOR	2073	Multidiscipline databases
10.	Oxford University Press	206	Multidiscipline databases
11.	Springer Link	1763	Multidiscipline databases
12.	Taylor and Francis	1173	Multidiscipline databases
13.	Wiley Blackwell Publishing	908	Multidiscipline databases

7.1 Chemistry and Allied Sciences

7.1.1 American Chemical Society (ACS)

The monthly downloads/views from ACS-database during 2007-2012 were recorded. The data for Nov-Dec 2008 was not available. It was observed that the total downloads during 2007-2012 were 2,39,166 and average downloads/views per year

Table 3. Number of downloads/view from ACS database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	2934	3142	3099	3373	2563	3283	2725	3990	3032	3295	2108	2610	36154
2008	2754	3060	2900	2925	3579	2551	3044	3386	3327	2498	---	---	30024
2009	3397	3631	3599	3121	3347	2809	2051	2885	2767	2482	2990	3076	36155
2010	4268	3563	3880	3594	3914	4189	5265	3786	3440	4117	3095	963	44074
2011	3519	3030	3224	2914	4128	3863	4404	3590	4089	2970	4136	4618	44485
2012	5621	4826	5308	3795	4329	3909	3845	3593	3168	3344	2870	3666	48274
Total												239166	
Average per year												39861	

were 39,861. From this database 37 full-text titles were subscribed. The average downloads per title per year were 1077. Considering this fact, it could be concluded that usage of this database was very high. Year 2008 shows decrease in downloads/views, due to unavailability of data for month of November and December from INFLIBNET (Table 3).

7.1.2 Royal Society of Chemistry (RSC)

The total downloads/view during 2007-2012 were 46,282 and average download/views per year were 7713. From this database 29 full-text titles were subscribed, The average downloads/views per title per year were 265. Considering this fact as compared to ACS the usage of RSC was very low, and less number of users were using this database. This also shows that ACS was more popular among chemistry subject users. There was increase in usage in 2012 (Table 4).

7.2 Physics and Allied Subjects

7.2.1 Institute of Physics (IOP)

The total downloads/views during 2007-2012 is 45926. The average download/views per year is 7654. From this database 46 full-text titles were subscribed, the average downloads per title per year is 166 considering this fact, usage of this database is good (Table 5).

7.3 Mathematics and Allied Subjects

7.3.1 Project Euclid

The monthly downloads/views from Project Euclid database during 2007-2012 were recorded. The usage during the last six years were 174, while average downloads/views per year were 29. From this database 35 full-text titles were subscribed. The average downloads/views per title per year were 0.82, considering this fact the usage of this database were very low (Table 6).

Table 4. Number of downloads/view from RSC database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	546	449	600	420	468	357	380	480	409	462	321	584	5476
2008	292	609	550	673	599	599	780	530	548	536	491	610	6817
2009	648	700	623	550	588	606	478	446	414	320	354	346	6073
2010	270	234	317	369	340	383	338	250	270	343	357	362	3833
2011	121	289	292	546	833	784	963	853	955	809	988	1008	8441
2012	1024	1032	1490	1182	1453	1395	1363	1208	1285	1376	1369	1465	15642
Total													46282
Average per year													7713

Table 5. Number of downloads/view from IOP database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	648	658	757	752	776	664	685	550	557	861	572	545	8025
2008	527	579	590	628	612	643	664	748	525	663	1067	570	7816
2009	748	589	599	631	670	722	693	605	736	632	667	1439	8731
2010	686	560	895	923	802	623	612	540	617	560	435	583	7836
2011	614	578	567	487	438	438	422	480	536	441	668	618	6287
2012	681	593	841	742	807	635	531	462	510	531	436	462	7231
Total													45926
Average per year													7654

Table 6. Number of downloads/view from Project Euclid database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	0	1	0	0	2	0	0	3	5	0	0	0	11
2008	0	3	1	0	0	0	0	0	1	1	0	1	7
2009	1	2	1	1	1	1	0	2	2	0	0	1	12
2010	1	1	1	3	0	1	5	6	11	4	12	2	47
2011	0	1	1	1	0	4	0	6	1	4	4	6	28
2012	2	1	5	5	14	10	6	0	3	6	13	4	69
Total													174
Average downloads per year													29

7.4 Humanities and Social Science

7.4.1 Emerald

The total download/views during 2007-2012 for Emerald database were 23,142, and average download/views per year were 3,857. From this database 29 full-text titles were subscribed. The average downloads per title per year were 133. The usage of this database is good. There was increasing trend in usage of this database and it was increasing at very good rate except in 2012.

7.4.2 Project Muse

The total usage of Muse database during six years were 4624 and average downloads/views per year were 770. From this database 493 full-text titles were subscribed, and the average download/views per title per year were 1.56 The usage is very low. From year 2007 to 2009 shows increasing trends in usage. In the year 2010 usage is almost negligible (Table 8).

7.5 Multidisciplinary Databases

7.5.1 JSTOR

The total downloads/views for JSTOR database during 2008-2012 were 1,35,933, and the average usage per year were 27186. From this database 2073 full-text titles were subscribed. The average downloads/views per title per year were 13.11. Data for 2007 was not available. The usage of this database is good but not satisfactory.

7.5.2 Annual Reviews

The total usage of Annual Review during 2007-2012 were 23,284, and average downloads/views per year were 3880. From this database 33 full-text titles were subscribed. The average downloads/views per title per year were 117. Considering this fact usage of this database is very good, but it was constantly decreasing during 2007-2012 (Table 10).

Table 7. Number of downloads/view from Emerald database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	90	275	116	157	51	17	72	350	8	5	10	31	1182
2008	133	148	187	246	100	126	94	128	107	183	110	97	1659
2009	153	345	697	173	162	41	151	136	128	118	122	153	2379
2010	331	247	923	255	199	151	198	330	310	582	512	196	4234
2011	645	644	1135	400	139	268	269	970	620	590	1020	672	7372
2012	834	722	683	830	462	401	217	423	312	482	497	453	6316
Total													23142
Average downloads per year													3857

Table 8. Number of downloads/view from Project Muse database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	186	70	0	0	0	0	0	96	74	97	38	78	639
2008	59	137	83	171	121	59	183	221	95	48	59	40	1276
2009	85	74	392	498	153	72	87	83	46	68	74	20	1652
2010	13	2	0	0	0	0	0	0	0	0	15	0	30
2011	3	2	6	10	48	69	84	73	27	130	66	48	566
2012	33	8	21	16	20	29	68	59	114	41	52	0	461
Total													4624
Average downloads per year													770

Table 9. Number of downloads/view from JSTORE database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2008	2050	2799	5837	2969	1087	2010	2340	3181	2399	1486	1090	1184	28432
2009	1322	1574	2332	2160	1331	824	1711	2021	1629	1645	2982	1345	20876
2010	3345	2513	3474	3205	2041	1572	2660	2098	2249	3298	1749	2250	30454
2011	2880	2125	2527	2283	2091	1482	2178	2252	2587	1905	3063	1470	26843
2012	2646	2362	3414	3012	2982	1873	2494	2649	2689	2093	1850	1264	29328
Total													135933
Average downloads per year													27186

7.5.3 Cambridge University Press (CUP)

The total usage of Cambridge University Press database during 2007-2012 were 9868, and average downloads/views per year were 1644. From this database 224 full-text titles were subscribed, the average downloads per title per year were 7.33. The usage of this database were low and constantly decreasing during 2007-2012. (Table 11).

7.5.4 Oxford University Press (OUP)

The total usage of Oxford University Press database during four years is 43975 and average downloads/views per year is 7329. From this database 206 full-text titles were subscribed, the average downloads/views per title per year were 34. The usage of this database is high as compared to Cambridge University press (Table 12).

7.5.5 Springer Link

The total usage of Springer Link during 2007-2012 were 1,57,533, and average downloads/views per year were 26,255. From this database 1763 full-text titles were subscribed, the average downloads/views per title per year were 14.89. The usage of this database is low considering number of titles in this database (Table 13).

7.5.6 Taylor and Francis

The total usage of Taylor & Francis during 2007-2012 were 24,751, and average downloads/views per year were 4125. From this database 1173 full-text titles were subscribed, the average downloads/views per title per year were 3.5. In 2011 and 2012 usage was low, as usage of some months was zero. But it was not clear that usage was zero or data was not added (Table 14).

Table 10. Number of downloads/view from Annual Review database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	723	471	656	821	292	359	507	796	716	1012	674	552	7579
2008	503	629	572	750	554	367	271	348	396	291	314	258	5253
2009	535	439	414	610	295	469	327	193	294	357	457	240	4630
2010	349	316	401	419	333	212	380	172	219	556	206	428	3991
2011	347	301	240	258	28	1	6	24	35	47	3	19	1309
2012	215	140	12	31	14	9	6	41	17	8	15	14	522
Total													23284
Average downloads per year													3880

Table 11. Number of downloads/view from Cambridge University Press database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	150	104	196	184	177	154	215	181	191	193	122	146	2013
2008	156	131	289	145	155	142	139	143	187	20	139	109	1869
2009	102	170	239	152	298	110	157	151	229	128	175	159	2070
2010	154	220	152	119	107	68	89	56	48	75	65	67	1220
2011	67	56	98	134	150	204	106	132	142	123	117	82	1411
2012	160	164	144	156	153	83	67	87	76	77	55	63	1285
Total													9868
Average download per year													1644

Table 12. Number of downloads/view from Oxford University Press database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	636	372	262	262	354	236	329	315	451	505	398	441	4561
2008	537	527	489	476	408	468	464	418	502	409	391	224	5313
2009	415	456	388	355	231	244	531	474	397	484	407	363	4745
2010	573	381	592	632	412	1147	547	435	404	638	380	358	6499
2011	1065	1085	1287	759	788	570	726	835	1003	676	1249	1092	11135
2012	1461	1316	1330	1366	911	647	887	778	773	908	628	717	11722
Total													43975
Average download per year													7329

Table 13. Number of downloads/view from Springer Link database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	522	655	709	904	909	1116	1037	1417	1224	1744	1298	2176	13711
2008	1628	1276	1300	1933	3434	1943	2708	1326	2043	1647	2391	2036	23665
2009	2080	2115	2037	2026	2136	1956	2467	1984	2292	1904	2249	2426	25672
2010	3483	3043	3031	3127	2188	2848	2632	1436	2456	2244	1785	3606	31879
2011	2596	2937	3717	2763	2917	2073	2879	2975	3190	2363	3163	3954	35527
2012	2950	3036	3705	3648	3887	2974	2258	2087	2335	179	16	4	27079
Total													157533
Average downloads per year													26255

Table 14. Number of downloads/view from Taylor & Francis database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2007	0	0	35	145	199	NA	NA	874	732	465	218	397	3065
2008	324	338	346	215	113	356	768	431	576	584	675	556	5282
2009	583	511	511	384	412	578	581	611	362	439	1767	137	6876
2010	113	96	16	2	57	377	575	890	2554	454	203	257	5594
2011	361	344	294	447	0	0	0	0	0	0	0	0	1446
2012	0	0	0	0	0	0	137	384	497	562	393	515	2488
Total													24751
Average downloads per year													4125

7.5.7 Wiley-Blackwell Publishing

The total usage of Wiley-Blackwell database during 2008-2012 were 65,902, and average download/views per year were 13,180. From this database 908 full-text titles were subscribed, and the average downloads per title per year were 14.51. The data of 2007 and data during June-Dec 2008 was not available (Table 15).

8. RANKING OF DATABASES

8.1 Total Downloads/Views

All the databases were ranked on the basis of their usage. ACS was the most used, and most popular database among all the databases, and got first rank. 37 titles were subscribed through this database. Second position was occupied by the *Spinger link*, but it includes 1763 subscribed journals titles. Third position was occupied by JSTOR

which includes 2073 subscribed journals titles. Fourth position was occupied by Wiley-Blackwell which cover 908 subscribed titles. RSC occupied 5th position but very close to 6th rank (Table 16).

The total downloads from all databases during 2007-2010 is 8,20,560 and average downloads/views per year is 1,36,760. The average downloads/views per title per year were 19.40.

8.2 Average Downloads/Views Titles

All the databases were ranked on the basis of average downloads per title during 2007-2012. In this analysis first two positions were occupied by the ACS and RSC, which were Chemistry-related databases. It shows that maximum users from Chemistry field were utilising the database. Third position was occupied by the IOP database which is related to Physics, i.e., Physics subject user ranks second in usage of database. Fourth position was occupied by the Emerald database, which is related

Table 15. Number of downloads/view from Wiley-Blackwell Publishing database in University of Pune

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2008	934	725	2544	1193	1051								6447
2009	377	510	887	777	566	369	373	516	281	358	413	126	5553
2010	294	97	12	0	11	0	0	0	1	1524	1756	2203	5898
2011	2066	1433	1506	1765	2002	1770	2556	2013	2183	1569	2140	2210	23213
2012	141	1642	3045	2759	2837	2121	1997	2161	1936	1997	1710	2156	24502
Total													65902
Average downloads per year													13180

Table 16. Ranking of databases on the basis of total downloads/view

S. No.	Name of database	No. of titles	2007	2008	2009	2010	2011	2012	Total	Rank
1.	ACS	37	36154	30024	36155	44074	44485	48274	239166	1
2.	Springer Link	1763	13711	23665	25672	31879	35527	27079	157533	2
3.	JSTORE	2073	----	28432	20876	30454	26843	29328	135933	3
4.	Wiley-Blackwell	908	----	6447	5553	5898	23213	24502	65902	4
5.	RSC	29	5476	6817	6073	3833	8441	15642	46282	5
6.	IOP	46	8025	7816	8731	7836	6287	7231	45926	6
7.	OUP	206	4561	5313	4745	6499	11135	11722	43975	7
8.	T and F	1173	3065	5282	6876	5594	1446	2488	24751	8
9.	Annual Review	33	7579	5253	4630	3991	1309	522	23284	9
10.	Emerald	29	1182	1659	2379	4234	7372	6316	23142	10
11.	CUP	224	2013	1869	2070	1220	1411	1285	9868	11
12.	Project Muse	493	639	1276	1652	30	566	461	4624	12
13.	Project Euclid	35	11	7	12	47	28	69	174	13
Total		7049	82416	123860	125424	145589	168063	174919	820560	

Table 17. Ranking of databases on the basis of total downloads/views per titles

S. No.	Name of database	No. of titles	2007	2008	2009	2010	2011	2012	Total	Average downloads/views per title 2007-12	Rank
1.	ACS	37	36154	30024	36155	44074	44485	48274	239166	6463.95	1
2.	RSC	29	5476	6817	6073	3833	8441	15642	46282	1595.93	2
3.	IOP	46	8025	7816	8731	7836	6287	7231	45926	998.39	3
4.	Emerald	29	1182	1659	2379	4234	7372	6316	23142	798	4
5.	Annual Review	33	7579	5253	4630	3991	1309	522	23284	705.57	5
6.	OUP	206	4561	5313	4745	6499	11135	11722	43975	213.47	6
7.	Springer Link	1763	13711	23665	25672	31879	35527	27079	157533	89.35	7
8.	Wiley-Blackwell	908	----	6447	5553	5898	23213	24502	65902	72.57	8
9.	JSTORE	2073	----	28432	20876	30454	26843	29328	135933	65.57	9
10.	CUP	224	2013	1869	2070	1220	1411	1285	9868	44.05	10
11.	T and F	1173	3065	5282	6876	5594	1446	2488	24751	21.10	11
12.	Project Muse	493	639	1276	1652	30	566	461	4624	9.37	12
13.	Project Euclid	35	11	7	12	47	28	69	174	4.97	13
Total		7049	82416	123860	125424	145589	168063	174919	820560	116	

to Library and Information Science. Fifth position was occupied by the Annual Reviews which cover maximum science subjects. Therefore, one can conclude that science users were making maximum use of these databases (Table 17). On the basis of ranking one can conclude that subject-specific databases have higher downloads/views per title, and used more than multi-subject databases.

8.3 Year-wise Downloads/Views from all Databases

Figure 2 shows downloads per year from all 13 databases and indicates that the overall usage is increasing, this means that more users are becoming aware and using e-databases.

9. CONCLUSIONS

Modern libraries are subscribing to more e-resources. It appears that lot of funds are utilised on subscribing these e-resources therefore, it is important to find the usage of these resources. In the University of Pune, usage of e-resources is increasing day-by-day. Users from chemistry field are more active in using e-databases that may be due to more research is on-going in Chemistry. Some databases contain very less titles, but the usage of these databases were very high. Subject specific databases are highly used than multi subject databases. In depth study of usage is not possible due to unavailability of titles-wise usage data.

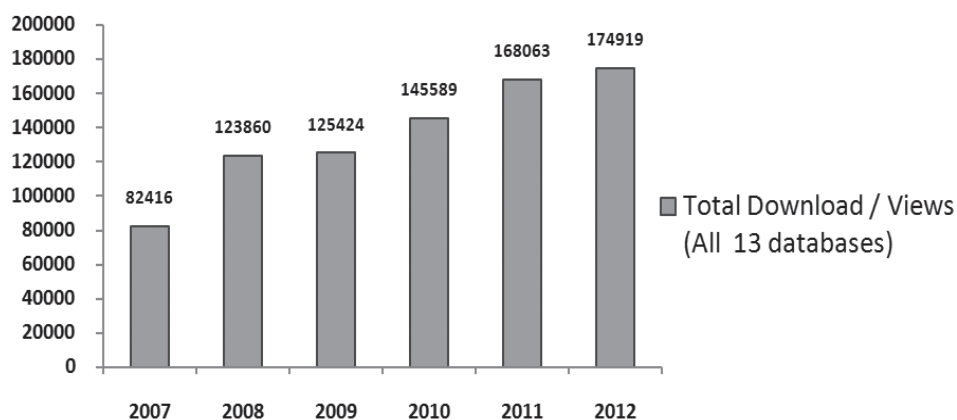


Figure 2. Year wise total downloads/views from all databases.

REFERENCES

1. <http://www.inflibnet.ac.in/econ/downloads.php/> (accessed on 27 January 2012).
2. Chand, Prem & Arora, Jagdish. Access to scholarly communication in higher education in India: Trends in usage statistics via INFLIBNET. *Program: Electronic Lib. Inf. Systems*, 2008, **42**(4), 382-90.
3. Singh, R.K., et al. UGC-Infonet usage in Manipur University: A statistical comparison of downloads from different publishers. *DESIDOC J. Lib. Inf. Technol.*, 2009, **29**(6), 13-20. <http://publications.drdo.gov.in/ojs/index.php/djlit/article/view/274/182>.
4. Bhatt, R.K. 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*, 2010, **31**(4/5), 319-43. <http://www.emeraldinsight.com/journals.htm?articleid=1860253>.
5. Walmiki, R.H.; Ramakrishnegowda, K.C. & Prithviraj, K.R. Awareness and use of UGC-Infonet digital library consortium by faculty member of Karntakat State University. *Annals Lib. Inf. Stud.*, March 2010, **57**, 33-43.
6. Mukherjee, B. & Kumar, P. Use of UGC-Infonet e-journals by the research scholars of the Banarus Hindu University, Varanashi: A case study. *Annals Lib. Inf. Stud.*, 2010, **57**, 339-47.
7. Pradhan, D.; Rai, A. & Arora Jagdish. Implication of SUSHI for analysis of usage statistics of e-resource: A study of UGC-Infonet digital library consortia. *Annals Lib. Inf. Stud.*, September 2012, **59**, 187-93.
8. Bhatt, Sunil & Rana, Madan Singh. E-information usage among engineering academics in India with special reference to Rajasthan State. *Library Hi Tech*, 2011, **29**(3), 496-511.
9. Suseela, V.J. Application of usage statistics for assessing the use of e-journals in University of Hyderabad: A case study. *The Electronic Lib.*, 2011, **29**(6), 751-61.