

USAGE OF E-JOURNALS THROUGH E-SHODHSINDHU (eSS) (2012-2019): A CASE STUDY OF KARNATAK UNIVERSITY, DHARWAD

- A. N. Joshi

- M.S. Patil

Dr. A. N. Joshi

University Librarian (I/c)
Prof. S. S. Basavanal Library,
Karnatak University, Dharwad –
580003, (Karnataka)
e-mail:
anuyadavaraya@gmail.com
Corresponding author

Dr. M.S. Patil

Assistant Librarian Selection
Grade,
Prof. S.S. Basavanal Library,
Karnatak University, Dharwad –
580003, (Karnataka)
E-mail:
mspatillibrarian@rediffmail.com

The paper deals with the usage of e-journals by the academic fraternity of Karnatak University, Dharwad offered by INFLIBNET through its e-ShodhaSindhu Consortium. The analysis is based on INFISTATS usage statistics portal developed by INFLIBNET for the period 2012-2019. Through this study the various platforms offering e-journals and among them, the most preferred ones are identified. The trend in the usage of e-journals is also analysed. The study identifies that in the year 2016 maximum use of e-journals was done and Science Direct is the most preferred platform. The effect of lockdown due to Covid-19 pandemic is also visible as the number of downloads is lowest in 2019.

Keywords: E-resources, e-ShodhSindhu, Karnatak University, Usage of e-journals, Research, INFLIBNET, INFISTATS

INTRODUCTION

Ease of access to e-resources has brought sweeping changes in the landscape of higher education by the turn of the millennium. The Information and Library Network Center (INFLIBNET), an interuniversity Center of University Grants Commission has played a major role in bringing the e-resources to institutes of higher education in India. In 2003 the UGC-Infonet Digital Library Consortium was launched by Honorable Dr. APJ Abdul Kalam, the then President of India to promote information access for the Universities. It was a national initiative for providing access to scholarly publications in electronic forms to academic institutions at a lower subscription rates and with favorable terms and conditions.

Later, the Ministry of HRD based on the recommendations of an Expert Committee merged the three consortia initiatives of UGC namely UGC-Infonet Digital Library Consortium, NLIST and INDEST-AICTE consortium to form e-Shodh Sindhu (eSS) which provides current as well as archival access to more than 10,000 core and peer reviewed journals and a number of bibliographic citation and databases in different disciplines. Currently eSS is catering to the needs of 137 state Universities, 41 Central

Universities, 21 Deemed Universities, 12 National Law schools and 6I UC's of UGC apart from CFTIs and AICTE funded institutions.

KARNATAK UNIVERSITY: A PROFILE

The Karnatak University is the second oldest University in the State of Karnataka. It was established at Dharwad in 1949. Over a period of seven decades the University, has played major role in higher education. The membership for e-journal consortium was done in a phased manner by INFLIBNET. The Universities covered under 12B of UGC Act were scanned for the diversity of resources required, number of scientific research undertaken students enrolled, internet connectivity in the campus and ICT infrastructure available. In phase I, 50 such Universities were selected to provide access to e-resources. The Karnatak University was among the first 50 Universities selected to be covered under phase I in 2004.

Since then the students, teachers and researchers are having access to e-journals which has proved very beneficial in their academic pursuit. All the departments of the University can access e-journals due to the LAN facility being extended in the campus. The research productivity has increased due to the access to international databases and full text journals.

REVIEW OF LITERATURE

Karthiban and Anjaiah (2018) performed a case study to ascertain the knowledge access and effective use of UGC-Infonet E-Journals by the faculty members and research scholars of University of Kerala, and found that 52.8% used

UGC-Infonet e-Journals every day. The study also revealed that 48% of respondents use Infonet e-Journals for research purpose, followed by 36.6% of respondents use to for updating of their subject knowledge, 69.9% percent of respondents are fully satisfied with the existing availability of e-journals. The study conducted by Kumar (2018) shows that the overall quality of e-ShodhSindhu consortium is assessed as above average. The research scholars of the University of Kerala discloses that the 77.28% of the researchers in Humanities and 65.22% in Social Science are satisfied with the resources available in the consortium, while only 32.42% in Science and Technology are satisfied and expect more journals. Esh (2019) revealed the extensive use of e-journal facilities of INFLIBNET by University of North Bengal during 2012 - 2018 and showed seven e-Journals had the highest percentage of use (91%). Singh et al. (2020a) conducted a comparative study to know the use of e-Shodh Sindhu Consortium by research scholars of Kurukshetra University (KUK) and Maharshi Dayanand University (MDU), the study revealed that scholars opined that consortium has enhanced their research quality. 25.64% research scholars of KUK and 32.14% research scholars have opined that e-ShodhSindhu helps them in finding relevant information and 30.76% and 28% of research scholars of KUK and MDU respectively feel that it has increased their knowledge about research publications.

A study to find out user awareness and usage of e-ShodhSindhu Digital Library Consortium by faculty members and research scholars of Mizoram University was conducted by

Chanchinmawia and Verma (2020) and found that 76% respondents are aware and use digital library consortium and 56% users opined need to conduct more awareness/training program for enhancing the use of e-ShodhSindhu Digital Library Consortium. Khera and Sharma (2020) have studied the Use of UGC-INFONET Digital Library Consortium in University libraries of Punjab and Himachal Pradesh and revealed that 63.89% respondents of Punjab and Himachal Pradesh were aware about UGC-INFONET and majority of respondents were using UGC-INFONET consortium for completion of assignments and seminars, 24% of faculty and 45% of researchers are satisfied with the consortium. Banaras Hindu University (BHU) library being one of the beneficiaries of the UGC-INFONET Digital Library Consortium, Singh and Sinha (2020) ascertained the usage of the e-resources available to the BHU library by the INFLIBNET Centre in e-resource consortium like UGC-INFONET Digital Library Consortium by the teachers and scholars of BHU. The survey findings indicate that 92.51% respondents are aware of UGC INFONET Consortium and the remaining 7.49% respondents are not aware of this programme. Also a good number of respondents, i.e. 36.89% felt that Electronic Resources are convenient to access, 22.45% users said that these save time and space, whereas, 19.25% users felt that effectiveness is one of the advantages. While 14.43% users agreed that searching and browsing is a great advantage of electronic resources and 6.95% users felt that cross-referencing is also an advantage of electronic resources out of many advantages.

Mondal and Dutta (2020) conducted a study in Burdwan University for its scholars and found that INFLIBNET e-journal consortia provides high quality content among University libraries. This study shows the popularity of e-journal with the help of INFISTATS in the period 2015-2019. JSTOR had the maximum usage (26.8%) of total download over the period 2015-2019, 7 of the top listed e-journals had the highest percentage of use (86.33%) proving that the popularity of e-journals is growing in the University of Burdwan.

RajitaDevi and Keshava (2020) explored the utilization of e-resources by the users of 23 Ayurvedic Medical College libraries of North Karnataka. A well-structured questionnaire was administered to the UG students, PG students and the faculty members of 23 Ayurvedic Medical Colleges of North Karnataka. 1150 questionnaires were distributed, out of which 1101 questionnaires were returned back with a response rate of 97.3%. The results show that 69.8% of users are aware of e-journals and 44.7% are aware of online databases. Shibin (2020) focused to analyse how the research scholars of National Institute of Technology Calicut make use of Nalanda digital library for their learning and research purpose. Online questionnaire method was used for the study. The analysis indicates that majority of researchers (64.38%) are moderately familiar with e-resources available in their digital library and mostly used e-resources are e-journals (49.32%). Most researchers (69.86%) use e-resources regularly for research and academic work purposes. The key reasons behind the use of e-resources are easy access to information and the availability of needed information. Majority

of the researchers (57.53%) are accessing these resources from their department libraries/labs. Among the respondents, majority (49.32%) are satisfied with the digital library resources.

Gadhvi and Yadav (2021) focused on the usage and the impact of the E-Resources accessible through e-ShodhSindhu Consortium in Universities of Gujarat. For this study, the usage of universities of Gujarat from the Consortium during the period 2012 - 2017 was considered. The growth rate of each university's publications published in Scopus database shows the maximum number was of Gujarat University (9.46%); followed by Saurashtra University (4.05%) and Sardar University (0.15%). Kumar (2021a) studied regarding e-Shodhsindhu consortium usage among libraries namely Mizoram University (MZU), Aizawl; University of Delhi (DU), Delhi; Jamia Millia Islamia (JMI), Delhi; Central University of Haryana (CUH), Haryana and Jawaharlal Nehru University, Delhi (JNU). Emerald and Science Direct are the most popular databases used among the user community. Periodicals are highly used category of information resources available through consortia among all the libraries under study. Kumar (2021b) also explored users' opinion on use and practice of e-ShodhSindhu: Consortium for Higher Education e-Resources by the users' of five member libraries of the consortium namely Mizoram University (MZU); University of Delhi (DU); Jamia MilliaIslamia (JMI); Central University of Haryana (CUH) and Jawaharlal Nehru University, Delhi (JNU). Results shows that among all the university libraries under study, majority of the users of DU are well aware about

e-ShodhSindhu consortia with 80.22% followed by 73.40%, 65.4%, 64.5%, and 59% in JNU, JMI, CUH and MZU respectively, with an overall response of 68.93% which is quite encouraging for LIS professionals and academics.

Tamizhchelvan et al.(2021) studied the trends in usage of the e-resources. The data available regarding of usage of e-resources through e-ShodhShindu Consortium at Infostat has been taken for analysis from 2012 to 2019. Nine publishers' e-journals are accessed through e-ShodhSindhu in Gandhigram Rural Institute. The 1,78,134 articles are downloads/views in during 2012-2019. It is found that Springer Link has downloads /views the highest number of 96,176 (53.96%) and placed in first rank and it is followed by JSTOR has downloads 32,242(18.09%) placed the second rank. It is further found that Project Muse has the least number of downloads, i.e. 276 (0.15%) placed in ninth rank. The review reveals that many articles have been published regarding the usefulness of e journals offered through INFLIBNET. Hence the present study was undertaken to know the preference of users of Karnatak University and based on which strategies need to be developed to cater their needs.

OBJECTIVES OF THE STUDY

This study is conducted to know the usage of e-resources available through eSS by the students, researchers and teachers of Karnatak University, Dharwad.

1. To know the year wise usage of e-resources through eSS by Karnatak University from 2012 to 2019.

2. To know the usage of different platforms offering e-resources to Karnatak University from 2012 to 2019.
3. To know the top ten platforms used by Karnatak University during each year from 2012 to 2019.
4. To identify the trend of most preferred three platforms during 2012-2019.

METHODOLOGY AND SCOPE OF THE STUDY

The data for the present study has been collected from INFISTATS – Usage statistics portal for e-resources from INFLIBNET center for monitoring the usage statistics of various e-resources made accessible to the member institutions for the period 2012-2019 pertaining to Karnatak University, Dharwad. The complete data for the entire period was available through INFISTATS which facilitated to undertake this study. The present study is conducted to know the usage of e-journals accessed through e-Shodha Sindhu platform of INFLIBNET and is limited to only the users of Karnatak University, Dharwad during the period 2012-2019.

SIGNIFICANCE OF THE STUDY

Electronic resources are an important component of collection building process of the libraries attached to institutes of higher education. eSS is a major provider of e-journals through various platforms to the member institutions. This

study is conducted to know the preference of the users which will enable the library to give feedback to INFLIBNET, thereby to get access to additional related information resources and also to draw a road map for its electronic collection building either through consortia or subscription in the forthcoming years.

ANALYSIS AND INTERPRETATION

Year wise usage of e-resources

The data shows that there is a steady increase in usage from 2012 to 2014. The usage was highest in 2016 i.e. 188609 downloads/searches followed by 186776 in 2014. In 2019 the usage was least with 57232 downloads/searches which may be a result of lockdown due to Covid 19 pandemic. The Table 1 shows the year wise usage of e-resources.

Platforms offering E-resources

The main source of current information for the researchers is e-journals. More than 10,000 e-journals are being offered through eSS through various publisher platforms. This paper intends to know the preference of these platforms by the users of Karnatak University. To analyse the usage of the e-journals by Karnatak University an attempt was made to know the various platforms offering the e-resources through eSS. The Table 2 enumerates the total platforms whose e-journals are accessed by K.U.Dharwad through eSS and yearwise usage of the said platforms is

Table 1: Year wise usage of E-resources

Year	2012	2013	2014	2015	2016	2017	2018	2019
Number of Resources	90,010	1,23,167	1,86,776	1,75,435	1,88,609	1,58,202	93,026	57,232

also shown. This helps the library to know the direction of research and also to procure/

subscribe other related information sources for the benefit of the researchers.

Table 2: Platforms offering e-resources and their usage

Sl. No.	Resources	2012	2013	2014	2015	2016	2017	2018	2019	Total
1	ScienceDirect	46500	61309	96605	91343	101642	80561	41343	17106	536409
2	Springer – Link	9523	21705	24062	18359	22081	16715	11371	14720	138536
3	American Chemical Society	10175	15129	20748	15319	17901	15287	9851	10326	114736
4	Wiley-Blackwell	2349	340	12319	11560	11605	11240	8609	0	58022
5	Royal Society of Chemistry	3708	0	9174	10197	10257	8905	3966	1385	47592
6	JSTOR	5340	7289	6718	5543	5572	4966	4110	917	40455
7	Taylor and Francis	2107	3868	4820	4666	4750	4802	4523	4305	33841
8	Oxford University Press	2664	3104	4043	5198	4545	4889	3716	3060	31219
9	Institute of Physics	2481	2611	2582	2652	2201	2317	1193	1387	17424
10	Nature	708	656	2546	2735	3628	3279	2719	0	16271
11	APS	1539	1669	1930	2065	1389	1924	935	754	12205
12	American Institute of Physics	1907	2537	2206	2391	1664	1159	0	0	11864
13	Emerald Publishing	0	0	524	2562	1669	1614	675	111	7155
14	Nature MPS	0	0	0	0	0	0	2171	3009	5180
15	Emerald	699	2091	1413	0	0	0	0	0	4203
16	Annual Reviews	247	582	473	244	398	201	130	227	2502
17	Project MUSE	41	238	210	207	70	178	101	1	1046
18	Cambridge Univ Press	0	0	375	312	237	0	0	0	924
19	Project Euclid	22	38	105	82	133	96	83	43	602
20	AIP	0	0	0	0	509	0	0	0	509
21	Portland Press	0	0	0	0	129	69	0	0	198
22	Palgrave Journals	0	0	0	0	0	1	3	0	4
23	CUP New	0	0	0	0	2	0	0		2
24	SIAM	0	1	1	0	0	0	0	0	2

The table shows that there are 24 publishers whose e-journals were accessible through eSS. The table also gives the year wise usage of these e-journals. The figures indicate the searches/downloads. It shows that the usage was at its peak in 2016 and preference for some selected sources is very clearly seen.

Top Ten Platforms Preferred by Karnatak University

Among the 24 platforms available through eSS, the study was made to know the top ten

platforms used by the faculty and students of Karnatak University. The study revealed that in each year the top ten platforms were not the same due to the varied usage. This can be linked with the nature of research being under taken by various departments of the University. However, an attempt was made to consolidate the data from 24 publishers during 2012-19 and a list of top ten publishers was drawn. The Table 3 lists the 10 publishers whose journals are highly used; against each platform the number of downloads is shown in each year.

Table 3: Top 10 Platforms Preferred by Karnatak University, Dharwad

Sl. No.	Resources	2012	2013	2014	2015	2016	2017	2018	2019	Total
1	ScienceDirect	46500	61309	96605	91343	101642	80561	41343	17106	536409
2	Springer – Link	9523	21705	24062	18359	22081	16715	11371	14720	138536
3	American Chemical Society	10175	15129	20748	15319	17901	15287	9851	10326	114736
4	Wiley-Blackwell	2349	340	12319	11560	11605	11240	8609	0	58022
5	Royal Society of Chemistry	3708	0	9174	10197	10257	8905	3966	1385	47592
6	JSTOR	5340	7289	6718	5543	5572	4966	4110	917	40455
7	Taylor and Francis	2107	3868	4820	4666	4750	4802	4523	4305	33841
8	Oxford University Press	2664	3104	4043	5198	4545	4889	3716	3060	31219
9	Institute of Physics	2481	2611	2582	2652	2201	2317	1193	1387	17424
10	Nature	708	656	2546	2735	3628	3279	2719	0	16271

Based on the data shown in Table 3, the percentage of usage of each platform was calculated and the Table 4 shows that a major share is by Science Direct which amounts to 52% of the total downloads, followed by Springer link with 13% and American Chemical Society with 11% show of the total downloads among the ten used platforms.

Percentage of usage of top 10 E-Resources

The usage of other platforms like Wiley Blackwell was with 6% usage, Royal Society of Chemistry with 5%, JSTOR with 4%, Taylor and Francis and Oxford University Press with 3% each followed by Institute of Physics with 2% and Nature with 1% of the top ten high used platforms.

Table 4: Percentage of usage of top 10 E-Resources

E-Resources	Usage
Science Direct	52%
Springer-Link	13%
American Chemical Society	11%
Wiley - Blackwell	6%
Royal Society of Chemistry	5%
JSTOR	4%
Taylor and Francis	3%
Oxford University Press	3%
Institute of Physics	2%
Nature	1%

Trends in usage of top three Platforms

The top three most used platforms by the users of Karnatak University were identified. As mentioned earlier Science Direct, Springer Link and American Chemical Society were most preferred publishers. The trend in their usage was studied. Science Direct which is Elsevier's leading platform of peer-reviewed scholarly literature shows distinct preference among all the platforms

with 5,36,409 total downloads in the entire period studied. A clear raise in usage was seen in 2014 and 2016. The highest usage was in 2016 with 101642 downloads. The American Chemical Society closely followed with total 1,14,736 downloads during 2012-2019, the highest usage was in 2014. The trend of these top three platforms is shown in Table 5.

Table No. 5 Trends in usage top 3 platforms

Platform	2012	2013	2014	2015	2016	2017	2018	2019	Total
Science Direct	46500	61309	96605	91343	101642	80561	41343	17106	536409
Springer-Link	9523	21705	24062	18359	22081	16715	11371	14720	138536
American Chemical Society	10175	15129	20748	15319	17901	15287	9851	10326	114736

CONCLUSION

The usage of e-journals began much early in Karnatak University, Dharwad as it was included in the first 50 Universities in phase I of INFLIBNET. The good internet connectivity and LAN facility in the campus has made access to e-journals much easier. The escalating price of journals has made it very difficult to libraries to subscribe them but eSS has been a boon to the institutes of higher education, where, access to the latest information resources is possible. A country's higher education system has a major role in deciding its status at the global level. A highly equipped work force needs to be developed for which access to the latest information sources with relative ease is essential. Thus, eSS has a significant role in teaching, learning and research activities in institution of higher education in India.

REFERENCES

1. Chanchinmawia F., & Verma, M. (2020). Awareness and Use of E-Shodhsindhu Digital Library Consortium Among Faculty Members and Research Scholars of Mizoram University: A Study. *International Journal of Library and Information Studies*, 10(4), 10-19. <https://doi.org/www.ijlis.org/articles/awareness-and-use-of-eshodhsindhu-digital-library-consortium-among-faculty-members-and-research-scholars-of-mizoram-univ.pdf>
2. Esh, M. (2019). Usage of e-Journals in University of North Bengal under INFLIBNET (2012-2018): Analysis with INFISTATS. *DESIDOC Journal of Library and Information Technology*, 39(4), 199-204.
3. Gadhvi, G. & Yadav, R.S. (2021). Measuring Impact of 'E-Shodh Sindhu' in Scholarly Publications. *Library Philosophy and Practice*, 5422. <https://doi.org/digitalcommons.unl.edu/libphilprac/5422>

4. Karthiban,H.,&Anjaiah, M. (2018). Knowledge, access and effective use of UGC-Infonet E-journals by faculty members and research scholars of University of Kerala:A case study. *International Journal of Advance Research, Ideas and Innovations in Technology*, 4(5),188-193.
5. Khera,D., & Sharma,S. (2020).Use of UGC-INFONET Digital Library Consortium in University libraries of Punjab and Himachal Pradesh: A Comparative study. *International Journal of Library Information Network*. 5(1),61-72.
6. Kumar, A.(2021a).E-ShodhSindhu Problems and Barriers Experienced by Librarians of Higher Educational Institutions. *Library Philosophy and Practice (e-journal)*. 5465. <https://doi.org/digitalcommons.unl.edu/libphilprac/5465>
7. Kumar, A.(2021b).Investigating Users' Experience about E-ShodhSindhu in Hunting the Relevant Information. *Library Philosophy and Practice (e-journal)*. 5195,1-34. <https://doi.org/digitalcommons.unl.edu/libphilprac/5195>
8. Kumar,S. (2018). Use of E-Resources in the E-ShodhSindhu Consortium by the Research Scholars of the University of Kerala: An Analytical Study. *ILIS Journal of Librarianship and Informatics*,1(1),74-84.
9. Mondal, D., & Dutta, S.(2020).Use of e-journals under INFLIBNET in The University of Burdwan (2015-2019): Analysis with INFISTATS. *Library Philosophy and Practice (e-journal)*, 4365. <https://doi.org/digitalcommons.unl.edu/libphilprac/4365>
10. Rajitadevi, &Keshava, J. (2020) Perceptions and Use of E-Resources by ayurvedic Medical College Library Users of North Karnataka. *Journal of Indian Library Association*, 56 (1), 32-42. <https://doi.org/www.ilaindia.net/jila/index.php/jila/article/download/365/177>
11. Shibin, S.B. (2020) Digital Library as a Learning Hub: A Survey among Research Scholars of National Institute of Technology, Calicut. *JIM - Journal of Information Management*, 7(1), 32-45. <https://doi.org/10.5958/2348-1773.2020.00005.3>
12. Singh,G.A., & Sinha, M. (2020). Use of Electronic Resources among Teachers and Scholars in Banaras Hindu University, Varanasi, Uttar Pradesh (Bharat): A Survey. *International Journal of Information Dissemination & Technology*,10 (1), 24-30.
13. Singh, S., Garg, N., & Sharma,C.(2020). Use of E-ShodhSindhu Consortium by Research Scholars: A Comparative Study of Kurukshetra University and Maharshi Dayanand University. *Library Philosophy and Practice*,4174,1-22. <https://doi.org/digitalcommons.unl.edu/libphilprac/4174>
14. Tamizhchelvan, M., Gopalakrishnan, S., &Anbalagan, M. (2021). Measure the usage of e-resources: Scientiometric model. *Library Philosophy and Practice*,4707. <https://doi.org/digitalcommons.unl.edu/libphilprac/4707>

