Analysis with INFISTAT the Usage of E-Resources of E-ShodhSindhu In State Universities of Haryana

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ABSTRACT

e-Shodh Sindhu is a digital initiatives of Indian Ministry of Human Resource Development, a merger of three consortium and provides e-Resources to member institutions of higher education. This study analyse the usage of e-Resources of eShodhSindhu from State University of Haryana with the objective to present the status of e-Resources of eShodhSindhu in State University of Haryana. This paper presents the most useful and important e-Journals, databases etc to improve quality in research, teaching, and education. As well as to explore the least used e-Resources so that their quality and usage can be improved for the optimum use of e-Resources. As optimum use of e-Resources is the recovery of worth in original.

KEYWORDS: eShodhSindhu, INFLIBNET, e-Resources, State University, Haryana, Infistat

Introduction

The efficiency of all resources expended by the institution must be evaluated by counting the number of views or downloads by the association. Depending on the efficient use of resources, on the next coming years may be spent or possible efforts may be made to increase their use. This necessitates the creation of a system that collects all of these views and downloads and produces usage reports. InfiStats, the Usage Statistics Portal for e-Resources, is a system designed by INFLIBNET for this purpose. Using this system, an individual institution can collect usage data in a variety of categories, such as journals wise, publishers wise, chronological wise, etc.
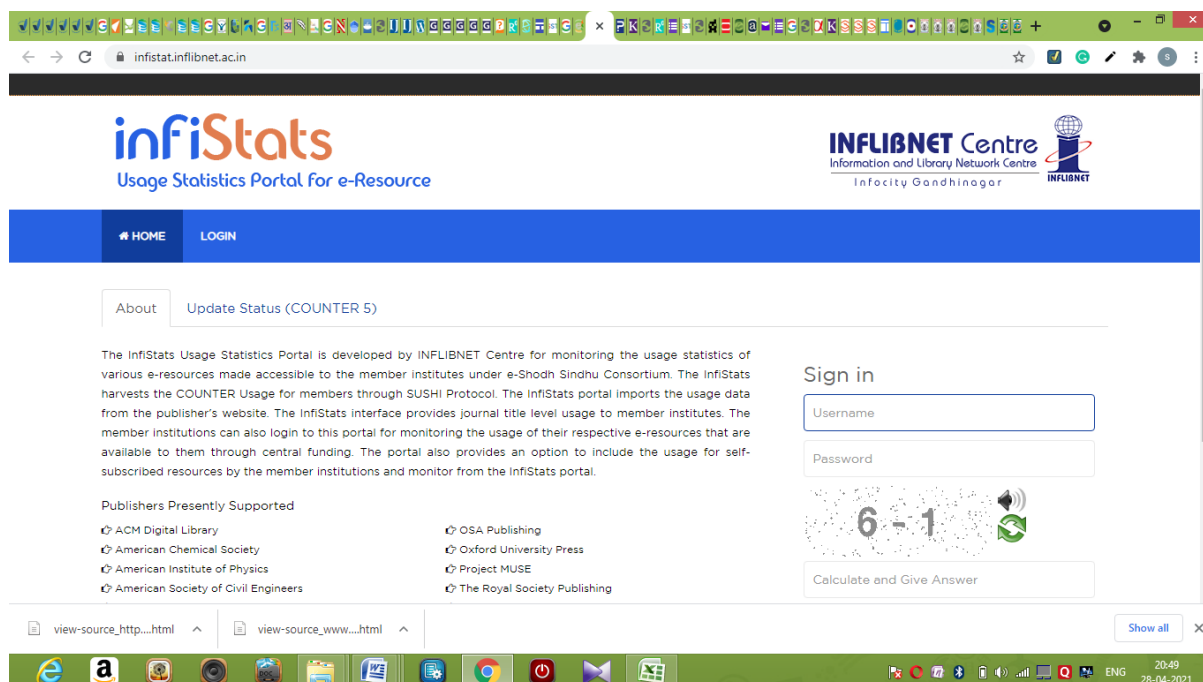
e-SHODHSINDHU

The UGC-INFONET Digital Library Consortium, NLIST, and the INDEST-AICTE Consortium have merged to form e-ShodhSindhu. The e-ShodhSindhu provides its member institutions low-cost access to high-quality electronic resources such as full-text, bibliographic, and factual databases with current and archival access to more than 10,000 core and peer-reviewed journals, in various disciplines from a variety of publishers. It can be accessed on website: https://ess.inflibnet.ac.in/ .

INFISTATS

INFISTATS, the e-resources usage statistics portal, was created to monitor the usage data of e-Resources through eShodhSindhu by INFLIBNET. It can provide all usage data by importing from various publishers automatically. Any member institution can collect the consolidated usage statistics of their e- Resources by using their login and password on the website: http://infistat.inflibnet.ac.in/ , provided by INFLIBNET.

Figure 1: Homepage of INFISTAT on INFLIBNET Website.

(**Source:** http://infistat.inflibnet.ac.in/)

REVIEW OF LITERATURE

Mondal and Dutta[1] (2020) conducted a study at University of Burdwan to check the use of ejournals given by INFLIBNET. For which he took the data of use of e-Resource by eShodhSindhu from 2015 to 2019. In which it has been found that the usage of JSTOR is the highest at 24.4%. Top listed seven ejournals have been the most used. It has been the lowest usage in 2019. What causes this usage to decrease? It is very important to know this. So that its use can be increased. Tamizhchelvan and Anbalagan[2] (2020) study the nine full-text databases from 2012 to 2019 with the aim to identify patterns in e-resource use, as well as high and low levels of use. According to the study, e-resource usage increased from 2012 to 2016 and then decreased. From 2019 onwards, to increase the usage of e-Resources remote access is provided to faculty members and research scholars. With compared to the arts, scientific faculty members and researchers are more active in using electronic databases. The use of subject-specific databases is much higher than that of multi-subject databases. This usage study can help librarians discover important information. Esh[3] (2019) studied the use of e-Resources from 2012 to 2018 by eShodhSindhu to check the use of eJournals offered by

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INFLIBNET at University of North Bengal. In which it has been found that the use of JSTOR and ScienceDirect is the highest at 55% and the use of seven ejournals is 91%. Pradhan[4] (2018) examined eShodhSindhu datbases by collecting the data of Infistat from 2012 to 2016 to look at the usage of various databases of e-resources. It was found that e-resources are used more.

OBJECTIVES

1. To know the total usage of e-Resources of eShodhSindhu under INFLIBNET by state university of Haryana.
2. To highlight the maximum and minimum use of e-Resources/databases.
3. To know the top two maximum e-resources/databases used.
4. To present the status of e-Resources in state universities of Haryana.
5. To identify the most preferred e-Resources/databases.

SCOPE OF THE STUDY

Only academic and special state university particularly of science and technology of Haryana have selected as the sample.

METHODOLOGY

The present study analyse the usage of e-Resources of eShodhSindhu subscribed by state and central university of Haryana with the help of InfiStat Data. The list of state and central universities and their URL were taken from the UGC website (http://www.ugc.ac.in). Only nine universities (CDLU, GJU, KUK, MDU, CUH, CRSU, BPSMV, DCRUST and YMCA) have been subscribing eShodhSindhu from these thirteen universities. But data are provided only from seven universities. Data has been collected directly from the INFISTATS website (usage statistics portal for e-resources) https://infistat.inflibnet.ac.in/. The collected data has been refined, tabulated, analyzed, and interpreted to search out meaningful findings and conclusion.

Table 1: Selected State Universities of Haryana to study

University	Full Name of University	URL of University	Established
CDLU	Chaudhary Devi Lal University	http://www.cdlu.in	2003
CCSHAU	Choudary Charan Singh Haryana Agricultural Univeersity	http://www.hau.ac.in	1970
GJUST	Guru Jambeshwar University of Science and Technology	http://www.gju.ernet.in	1995
KUK	Kurukshetra University	http://www.kuk.ac.in	1956
MDU	Maharishi Dayanand University	http://www.mdurohtak.ac.in	1976
CBLU	Ch. Bansi Lal University	https://cblu.ac.in/	2014
CRSU	Chaudhary Ranbir Singh University	http://www.crsujind.org	2014
CUH	Central University, Haryana	https://cuh.ac.in/	
BPSMV	Bhagat Phool Singh Mahila Vishwavidyalaya	http://bpsmv.digitaluniversity.ac/	2006

DCRUST	Deen Bandhu Chhotu Ram University of Sciences & Technology	http://www.dcrusm.org	2006
PDDUHS	Pandit Deen Dyal University of Health Science	Not has infrastructure	2016
YMCA	J. C. Bose University of Science & Technology, YMCA	http://ymcaust.ac.in	2009
PBDSUHS	Pt. Bhagwat Dayal Sharma University of Health Sciences	http://www.uhsr.ac.in	2008

Table 2: Publisher's Database for e-Resources provided by eShodhSindhu

Sr No	Publisher's Database
1	ACM Digital Library
2	American Chemical Society
3	American Institute of Physics
4	American Society of Civil Engineers
5	ASME
6	Annual Reviews
7	APS
8	Bentham
9	Cambridge University Press
10	Institute of Physics
11	JSTOR
12	MathSciNet
13	OSA Publishing
14	Oxford University Press
15	Project MUSE
16	The Royal Society Publishing
17	Royal Society of Chemistry
18	ScienceDirect
19	Scopus
20	SIAM
21	Springer-Nature
22	Taylor & Francis
23	Web of Science
24	Wiley-Blackwell
25	Nature
26	SpringerLink

Table 3: University wise list of subscribed databases of eShodhSindhu

	CDLU	BPSMV	CUH	CRSU	DCRUST	KUK	YMCA
American Chemical Society	-	-	-	-	Not Provided	American Chemical Society	-
American Institute of Physics	-	-	-	-	-	American Institute of Physics	-
Annual Reviews	-	-	-	-	-	Annual Reviews	-
APS	-	-	-	-	-	APS	-
Emerald	-	-	-	Emerald	-	-	-
JSTOR	JSTOR	JSTOR	-	-	-	JSTOR	-
MathSciNet	-	-	-	-	-	MathSciNet	-
Nature	Nature	Nature	-	-	-	Nature	Nature
Oxford University Press	-	-	Oxford University Press	-	-	Oxford University Press	-
Project MUSE	Project MUSE	-	-	-	-	-	-
ScienceDirect	-	-	ScienceDirect	-	-	-	-
SpringerLink	SpringerLink	SpringerLink	SpringerLink	-	-	SpringerLink	SpringerLink
Taylor & Francis	Taylor & Francis	-	-	-	-	Taylor & Francis	Taylor & Francis
Web of Science	-	-	-	-	-	Web of Science	-
Wiley-Blackwell	-	Wiley-Blackwell	-	-	-	-	-

Table 3 shown the different state university of Haryana provides access to different databases of total fifteen e-journal databases from twenty six e-journal databases through eShodhSindhu in 2020.

DATA ANALYSIS AND INTERPRETATION

Frequency, Percentage, and Ranking Method was used to analyze the data. Data was analyzed by using application software MS Excel. Further graphs and charts like Bar Diagram, line diagram, Pie diagram is also used as a graphical representation for the tabulated data.

Table 4: Total Usage of e-Resources from different university

Name of University	Usage of e-Resources	Percentage of Usage (%)	Rank
CDLU	3073	04.23	5
CRSU	210	0.29	7
CUH	5130	07.06	3
DCRUST	36024	49.58	1
BPSMV	4774	6.57	4
GJUST	-	-	-
KUK	22396	30.82	2
MDU	-	-	-
YMCA	1054	1.45	6

Figure 2: Total Usage of e-Resources from different university
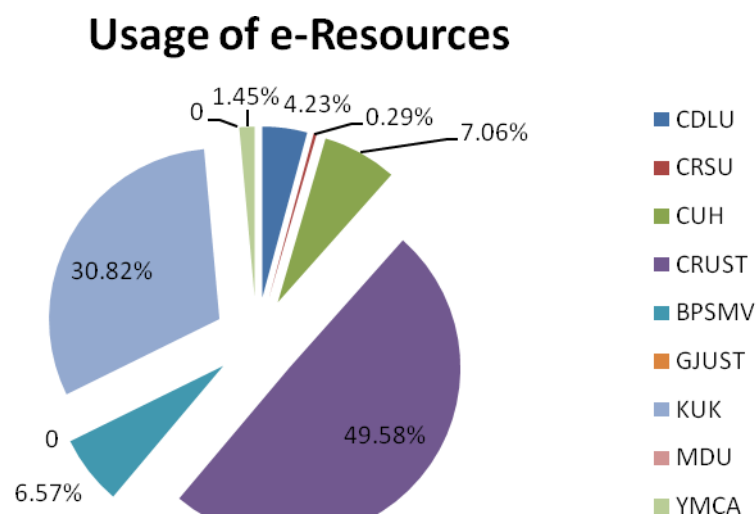

Table 4 indicates the total access of e-resources in a year from different state university of Haryana. The nine state university of Haryana are accessed e-journal databases through e-ShodhSindhu. The 72661 articles are downloads / views in during the year 2020. It is found that Deenbandhu Chotu Ram University of Science and Technology has downloads /views the highest number of 36024 (49.58%) times and placed first rank and it is followed by Kurukshetra University has downloads 22396 (30.82%) times have placed second rank. It is further found that YMCA has downloads least

number of 1054 (1.45%) times and have placed sixth rank and CRSU has seventh rank with very least downloads 210 (0.29%). GJUST and MDU have been subscribing eShodhSindhu, but not provide the data.

Table 5: Most Preferred e-Journals/databases by users of different university

	CDLU	BPSMV	CUH	CRSU	DCRUST	KUK	YMCA	Total of all usage resources wise	Percentage	Rank
American Chemical Society	-	-	-	-	-	1826	-	1826	4.98	5
American Institute of Physics	-	-	-	-	-	343	-	343	0.94	11
Annual Reviews	-	-	-	-	-	107	-	107	0.29	13
APS	-	-	-	-	-	391	-	391	1.07	9
Emerald	-	-	-	210	-	-	-	210	0.57	12
JSTOR	1637	4231	-	-	-	4912	-	10780	29.41	2
MathSciNet	-	-	-	-	-	04	-	04	0.01	15
Nature	86	15	-	-	-	563	30	694	1.89	7
Oxford University Press	-	-	521	-	-	405	-	946	2.58	6
Project MUSE	21	-	-	-	-	-	-	21	0.06	14
ScienceDirect	-	-	3202	-	-	-	-	3202	8.74	4
SpringerLink	956	155	1407	-	-	10398	724	13640	37.21	1
Taylor & Francis	373	-	-	-	-	2985	300	3658	09.98	3
Web of Science	-	-	-	-	-	462	-	462	1.26	8
Wiley-Blackwell	-	373	-	-	-	-	-	373	1.02	10

Figure 3: Most Preferred e-Journals by users of different university

Most Preferred e-Resources

- American Chemical Society
- American Institute of Physics
- Annual Reviews
- APS
- Emerld
- JSTOR
- MathSciNet
- Nature
- Oxford University Press
- Project Muse
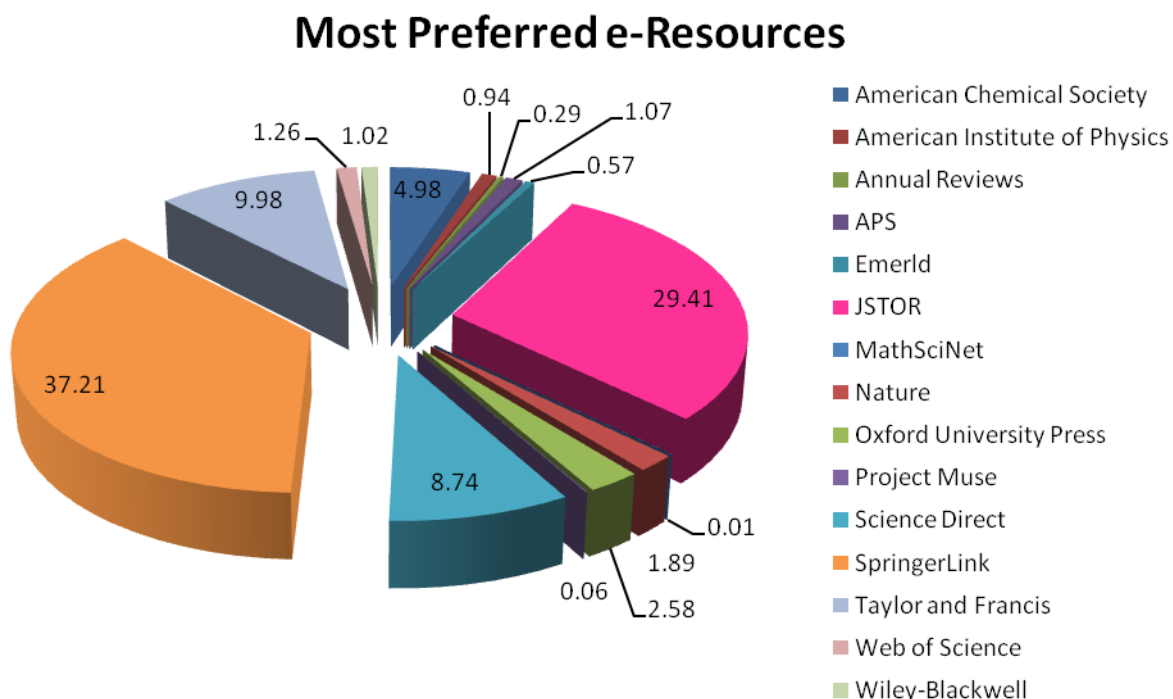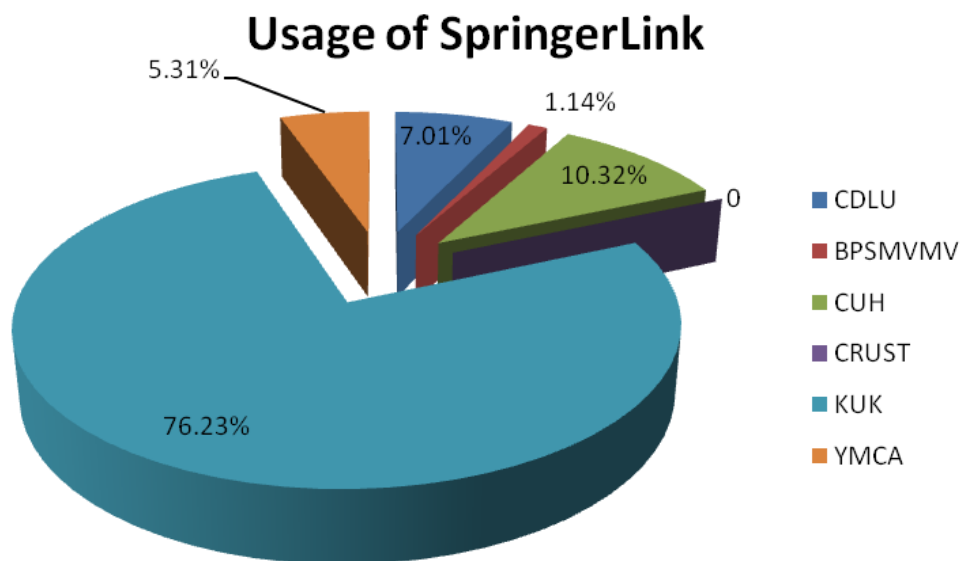- Science Direct
- SpringerLink
- Taylor and Francis
- Web of Science
- Wiley-Blackwell

Table 5 shows SpringerLink, JSTOR, and Taylor & Francis has most preferred by users of each university and got 1st, 2nd, and 3rd rank with 37.21%, 29.41% and 09.98%. MathSciNet, and Project MUSE are least preferred by users and got 14th and 15th rank with 0.06% and 0.01%.

Table 6: Usage of SpringerLink

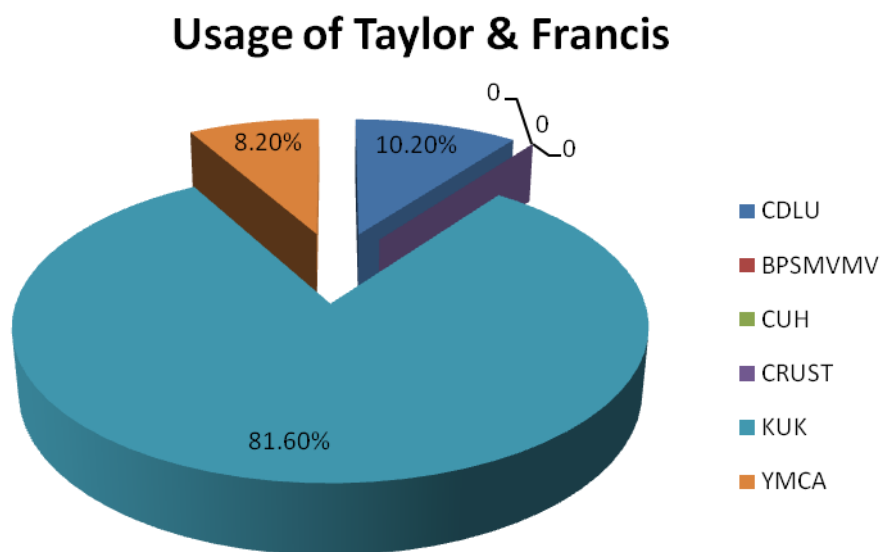| Name of University	Usage	Percentage	Rank
CDLU	956	7.01	3
BPSMV	155	1.14	5
CUH	1407	10.32	2
DCRUST	-	-	-
KUK	10398	76.23	1
YMCA	724	5.31	4

Figure 4: Usage of SpringerLink

This database provides access to a lot's of scientific documents. Table 6 shows the usage of SpringerLink and it is found that 13640 articles were downloaded / viewed from SpringerLink in the year 2020 by different universities. It is found majority numbers of 10398 (76.23%) articles were download/viewed in KUK in the year 2020 and placed first rank. It is followed by CUH has accessed 1407 (10.32%) articles were downloaded/ viewed and placed second rank. It is further found that less number of 155 (1.14%, Rank 5) accessed by BPSMV.

Table 7: Usage of Taylor & Francis

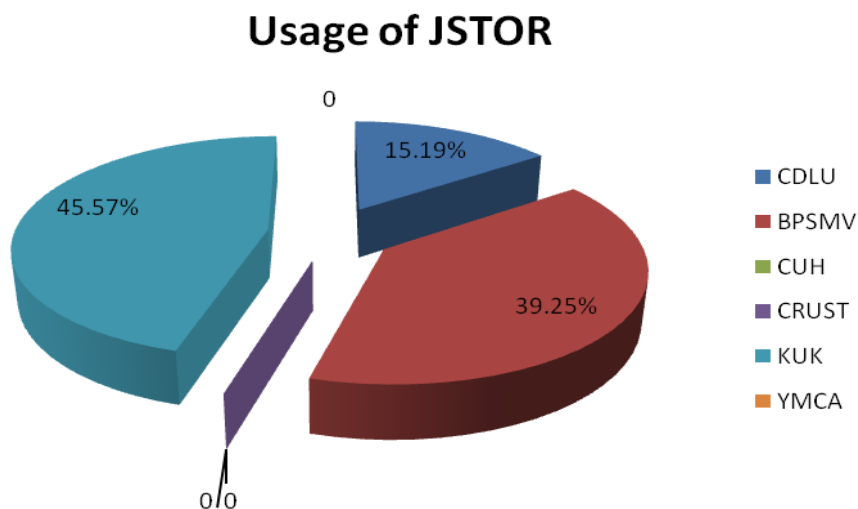| Name of University	Usage	Percentage	Rank
CDLU	373	10.20	2
BPSMV	-	-	-
CUH	-	-	-
DCRUST	-	-	-
KUK	2985	81.60	1
YMCA	300	8.20	3

Figure 5: Usage of Taylor & Francis

This database provides access to many more scientific documents. Table 7 shows the usage of Taylor & Francis, which is found that 3658 articles were downloaded / viewed from Taylor & Francis in the year 2020 by different universities. It is found majority number of 2985(81.60%) articles were downloaded/ viewed in KUK in the year 2020 and placed first rank. It is followed by CDLU has accessed 373 (10.20%) articles were downloaded/ viewed and placed second rank. It is further found that less number of 300 (8.20%, Rank 3) accessed by YMCA.

Table 8: Usage of JSTOR

Name of University	Usage	Percentage	Rank
CDLU	1637	15.19	3
BPSMV	4231	39.25	2
CUH	-	-	-
DCRUST	-	-	-
KUK	4912	45.57	1
YMCA	-	-	-

Figure 6: Usage of JSTOR

This full text database provides access to millions of scientific and humanities related documents. Table 8 shows the usage of JSTOR and it is found that 10780 articles were downloaded / viewed from JSTOR in the year 2020 by different universities. It is found majority number of 4912 (45.57%) articles were downloaded/ viewed in KUK in the year 2020 and placed first rank. It is followed by BPSMV has accessed 4231 (39.25%) articles were downloaded/ viewed and placed second rank. It is further found that less number of 1637 (15.19%, Rank 3) accessed by CDLU.

INTERPRETATION AND DISCUSSION

If any database is used more often, it shows its importance, effectiveness, relevance and popularity. As per results, Springer Link, JSTOR, and Taylor & Francis are used maximum. These are most popular and effective in research, teaching and education. MathSciNet, and Project MUSE are least preferred by users,

According to a report by Mondal and Datta, the use of the MathSciNet database at University of Burdwan increased during 2015 to 2017, after that its usage was decreased. And the Project MUSE is also not preferred. It is now necessary to find out the reason for the low usage of these databases. And efforts should be made to expand its use and quality.

FINDING AND SUGGESTIONS

- The study found nine state university of Haryana are accessed e-journal databases through e-ShodhSindhu.
- It is found that Deenbandhu Chotu Ram University of Science and Technology has downloads /views the highest number of 36024 (49.58%) times and placed first rank.
- The study found that Kurukshetra University has downloads 22396 (30.82%) times have placed second rank.
- It is also found that YMCA has downloads least number of 1054 (1.45%) times have placed sixth (Last) rank.

- The study found SpringerLink, JSTOR, and Taylor & Francis are most preferred by users of each university and got 1st, 2nd, and 3rd rank with 37.21%, 29.41% and 09.98%.
- MathSciNet, and Project MUSE are least preferred by users and got 15th and 14th rank with 0.01% and 0.06%.

SUGGESTIONS

- To aware the users by organising the awareness programme seminars, workshop and conferences.
- To recognise and improve the quality of least used e-Resources.
- To motivate the users regarding the use of least used e-Resources to increase the usage.
- All average databases use can be increased even though all of the eShodhSindhu's databases are made available to all universities.

CONCLUSION

The usage of e-resources of eShodhSindhu from Haryana State Universities has been analyzed. SpringerLink, JSTOR, and Taylor & Francis are most popular among each university's users, while Nature, American Chemical Society, ScienceDirect, Web of Science is used on average. MathSciNet and Project MUSE, on the other hand, are the least preferred by users. It's now crucial to figure out why these databases are under-utilization. It should also be prioritised to boost its efficiency in order to increase its use. Apart from this, all average databases use can be increased even though all of the eShodhSindhu's databases are made available to all universities.

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