

Use of 'INFLIBNET Access Management Federation System' by Research Scholars' of Gautam Buddha Library, Babasaheb Bhimrao Ambedkar University, Lucknow: An Analytical Study

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Abstract: This paper includes the study of awareness and use of INFLIBNET Access Management Federation System (INFED) by users of Gautam Buddha Library (GBL), Babasaheb Bhimrao Ambedkar University (BBAU), Lucknow. GBL is the central library of BBAU. This study used the questionnaire method for data collection. So Google Form of the questionnaire was mailed for the purpose of data collection. This study basically discusses that 83.9% of respondents out of 81 are aware of e-Resources accessed through INFED community. The majority of users access these e-Resources on the University campus, followed by Off-campus also. 75% of users access e-Journals through INFED. The reasons 67.6% of users are using these e-Resources to enhance the research activity, access study material etc. Several users also faced problem while accessing, i.e. poor connectivity, lack of information related to my field, lack of IT skills, fluctuation in electricity, individual problems etc.

Keywords: Awareness, e-Resources, Gautam Buddha Library, INFED, INFLIBNET, Remote Access, Research Scholar, etc.

1. INTRODUCTION:

The internet can be defined as the worldwide communication of computers and other electronic devices. Using this, anyone can access to knowledge from anywhere in the world. As a result, the demand for the internet is increasing over time as people are using the internet to perform different task from doing business to teaching and training etc. As information technology has emerged in the last few decades, the role of the internet has become even more important. Library and Information System have also changed along with rapid technology advancements. Libraries are actively procuring, organising, and managing library collections, i.e. e-books, e-journals, e-thesis/e-dissertation, etc. These e-forms of the collection are considered in e-resources. INFED e-resources are provided by INFLIBNET to its member institutions. In these institutions, users get an IP address to access e-resources outside of the campus and inside the campus.

Gautam Buddha Library is the central library of Babasaheb Bhimrao Ambedkar University (established in 1996) also a subscriber of INFED e-resources. Users of GBL can remotely access the e-resources through INFED, which are subscribed by university.

1.1 ABOUT INFED :

Most publishers use institutional server-based IP Address for providing access to e-resource for their authentic and authorized users. Though IP based access is most secure, safe, convenient and hassle-free, but it has its limitations. One of the most common limitations is to access e-resources by users at institutions campus only.

So, for overcoming this limitation, INFED, the INFLIBNET ACCESS MANAGEMENT FEDERATION SYSTEM, has adopted Shibboleth, a standard-based open-source software. The primary goal of INFED is to allow its users to access not only anytime, anywhere, but it would also provide the facility to maintain multiple passwords for multiple resources in various domains in a single institutional controlled ID.

In India, INFLIBNET is one of its core centres that provide access to scholarly e-resources to universities and colleges under the program of e-Shodhsindhu. INFED manages the trust between the member institutions and publishers and hosts the database of authorized users at servers installed at the INFLIBNET centre.

Though, at the time of conducting the study, the program was named as 'INFLIBNET ACCESS MANAGEMENT FEDERATION SYSTEM (INFED).' Meanwhile, the 'INFLIBNET ACCESS MANAGEMENT

FEDERATION SYSTEM' (INFED) is renamed as 'INDIAN ACCESS MANAGEMENT FEDERATION SYSTEM' (INFED) same acronym by its parent institution, i.e. INFLIBNET. Since the research was conducted while the program is named INFED, the term 'INFED' is used as and when the necessity arose.

2. REVIEW OF LITERATURE:

Srinivasulu, P., Chinna Balu, C. and Narendra, A. (2019) examined the utilization of e-resources among faculty members of Vardhaman College of Engineering. This paper explained that out of 192 respondents, 70.83% respondents were male, and 29.17% were female. Most of the respondents were using e-resources daily (92.19%), and second highest is 2-3 time a week (78.12%). The highest number (89.06%) of respondents accessed the e-resources in the central library and 91.14% of respondents were using e-resources for publishing articles/books, followed by 85.95% were using for research, 76.04% were using for getting significant information in the area of specialization and 70.31% for academic/teaching. In e-resources, e-journals/e-books, e-audio video lectures/NPTEL content, e-databases are mostly used by the respondents. Also found that 57.81% of respondents faced lack of time problem.

Singh, P. K. and Gupta, S. (2020) this study conducted to know the awareness and use of e-resources by the MBBS students in government medical college, Jammu. The authors had used a structured questionnaire to collect the data. This study described that's almost all respondents (92.73%) were aware, and 44.54% of respondents were preferred DOAJ for accessed e-resources. 34.09% of respondents were using e-resources daily, and more than 50% of respondents used e-resources for education. The study also reveals that 43.64% of respondents were least satisfied with accessed the e-resources, followed by partially (40%) and fully (16.36%). Most of the respondents were used library catalogue and e-journals.

Sawai, A. B. and Chavan, S.P. (2020) the study carried out to analyze the usage of e-resources by the teachers of various college libraries in Marathwada. The study shows that near about 50% of respondents were visited the library every day, and most of the respondents said they used mostly e-journals, e-books and e-databases in the library. Respondents said that research and publication are the main purposes of using e-resources. Low internet speed and downloading are the main problems found by the respondents.

3. OBJECTIVES OF THE STUDY:

The study is designed & conducted to achieve the following objectives:

- I. To know the level of awareness of accessing INFED e-resources by the users.
- II. To know the purposes behind using INFED e-resources by the users.
- III. To find out frequency of using INFED e-resources by the users.
- IV. To identify the problems faced by users in using/accessing of INFED e-resources.
- V. To know the users' satisfaction level.

4. RESEARCH METHODOLOGY:

The present study focuses on the awareness, access and use of electronic resources through the **INFLIBNET Access Management Federation System (INFED)** by the users of the GBL, BBAU. It also highlights the present scenario of e-resources access in the university library. Users of the library include only Research Scholars of the university.

This study is based on the survey method. In this study, the questionnaire was the main tool for data collection. In a covid situation, researchers could not meet with respondents personally. A questionnaire was prepared in Google form and mailed to the research scholars. For the purpose of the study, researchers have been mailed 100 questionnaires, but due to this covid pandemic situation, only 81 responses could receive in all.

5. DATA ANALYSIS AND INTERPRETATION:

TABLE 6.1: Gender wise Response

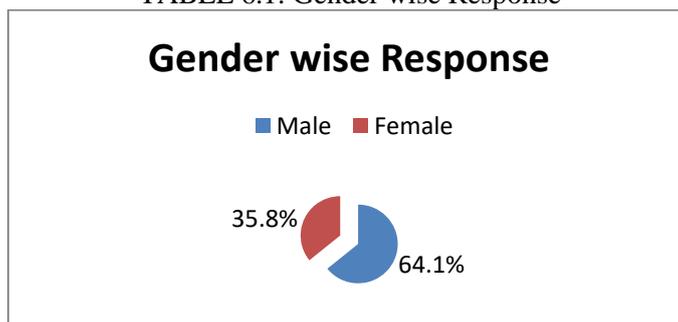


Figure 1.

Figure 1 shows the gender-wise response of users of GBL. Result received from 64.1% and 35.8% male and female, respectively. The highest numbers of males are involved in this study.

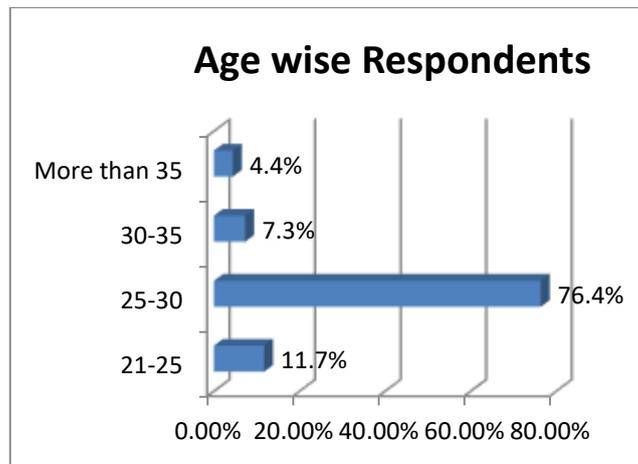


Figure 2.

Figure 2 shows the age-wise distribution of research scholars. Maximum respondents 76.4% are between 25-30 years, followed by 11.7% respondents between 21-25 years, 7.3% respondents are between 30-35 years and only 4.4% respondents are more than 35 years.

TABLE 6.3: Awareness of using e-resources accessed through INFED

Particular	Number of respondents	Percentage
Yes, they aware	68	83.9%
No, they don't	13	16%
Total	81	100%

Table 6.3 shows that about 68 (83.9 %) users out of 81 respondents are aware of e-resources access through INFED, while 13 (16 %) users are not aware of this.

TABLE 6.4: Frequency of using e-resources through INFED

Particular	Number of respondents	Percentage
Daily	11	16.1%
Once in a week	34	50%
Once in a month	12	17.6%
Less than a month	11	16.1%
Total	68	100%

Table 6.4 shows that 50% users use INFED e-resources once in a week, 17.6% users use INFED in once in a month, 16.1% of users use INFED on a daily basis and less than once in a month.

TABLE 6.5: Places from where e-resources are accessed

Particular	Number of respondents	Percentage
University Campus	46	67.6%
Off Campus	33	48.5%
Others	11	16.1%

Table 6.5 shows that 67.6% of users use the INFED e-resources at the university campus, 48.5% of the users use it from off-campus, whereas 16.1% use it at other places.

TABLE 6.6: Time spent on INFED remote access system

Time spent	On Campus Number of respondents (%)	Off Campus Number of respondents (%)
0-1 hour	30 (44.1%)	33 (48.5%)

2-3 hours	28 (41.1%)	29 (42.6%)
3-4 hours	02 (3%)	02 (3%)
More than 4 hours	07 (10.2%)	03 (4.4%)

Table 6.6 indicates that 44.1% of users use INFED e-resources ‘On Campus’ for up to one hour and 48.5% use INFED e-resources ‘Off Campus’ up to one hour. While 10.2% users use INFED e-resources ‘On Campus’ and 4.4% users use INFED e-resources ‘Off-Campus’ more than 4 hours. As compared to ‘On Campus’, maximum users through ‘Off-Campus’ spend 0-1 hour and 2-3 hours their time.

TABLE 6.7: Device used to access e-resource through remote access

Particular	Number of respondents	Percentage
Laptop	46	67.6%
Smartphone	45	66.1%
Desktop	24	35.2%
Tablet	2	2.9%

Table 6.7 shows that most users use Laptop (67.6%) and Smartphone (66.1%) to access e-resource through remote access. Whereas 35.2% of users use desktop and 2.9% users use tablet.

TABLE 6.8: Internet network use to access through INFED

Particular	Number of respondents	Percentage
Broadband	20	29.4%
Mobile data	52	76.4%
Wi-Fi	48	70.5%

Table 6.8 shows that mobile data is used by the maximum number of users (76.5%), followed by 70.5% of users connect with Wi-Fi and 29.4% of users through broadband.

TABLE 6.9: E-resources are used through INFED

Particular	Number of respondents	Percentage
e-Books	50	73.5%
e-Journals	51	75%
e-Newsletter	19	27.9%
e-Magazine	18	26.4%
Databases	29	42.6%

Table 6.9 shows that 75% of users use e-journals through INFED, 73.5% of users use e-books and 42.6% use databases through INFED. Only 26.4% of the users use e-magazines.

TABLE 6.10: Reason for using e-resources through INFED

Particular	Number of respondents	Percentage
To enhance the Research activity	46	67.6%
To utilize the Web resources	26	38.2%
To Access the Study material	42	61.7%
To enhance the basic Information	28	41.1%
Availability of various Searching tools	19	27.9%
Its saves Time	28	41.1%
Easy Accessibility	34	50%
No need to step-in into library	14	20.5%
Quite indulging	3	4.4%

Table 6.10 interprets that most of the users (67.6%) are using INFED to enhance the research activity, and 61.7% of users used INFED to access study material, 50% of users found INFED as easily accessible for their resources, 41.1% of users use this to enhance the basic information, 41.1% users found it saves time.

TABLE 6.11: Databases uses through accessing e-resources INFED

Particular	Number of respondents	Percentage
American Chemical Society	20	29.4%
JSTOR	29	42.6%
Project Muse	12	17.6%
Springer Link	31	45.5%
Taylor and Francis	33	48.5%
Oxford university press	28	41.1%
Cambridge University press	17	25%
Brill Journal Archives Online	6	8.8%
ProQuest's e-book Central Academic (Known as ebrary)	16	23.5%
De Gruyter	2	2.9%
Emerald	28	41.1%
Economic & Political Weekly	19	27.9%
Wiley-Blackwell	10	14.7%
Science Direct	23	33.8%
Institute of Physics	5	7.3%
Any other	1	1.4%

Table 6.11 shows the list of highly used databases by the users of GBL. Most of the respondents use Taylor and Francis, i.e., 48.5% followed by Springer Link database (45.5%), JSTOR database (42.6%) and 41.1% of Emerald and Oxford university press, Science Direct (33.8%), American chemical society (29.4%), Economic & political weekly (27.9%) and Cambridge university press (25%).

TABLE 6.12: Journal Articles are accessed in the last 12 months

Particular	Number of respondents	Percentage
More than 30	18	26.4%
21 to 30	5	7.3%
11 to 20	11	16.1%
Less than 10	18	26.4%
None	16	23.5%

According to the table, most of the users, i.e. respondents (26.4%), have given the same response on accessing more than 30 journal articles and less than 10 journals from the last 12 months, followed by 16.1% users have accessed 11 to 20 journal articles and 7.3% users have accessed 21 to 30 journal articles. 23.5% of the users have not accessed any journal articles from the last 12 months.

TABLE 6.13: Users' identification of relevant electronic articles

Particular	Always	Often	Sometime	Rarely	Never
Browsing through recent issues	3 (4.4%)	24 (35.2%)	3 (4.4%)	13 (19.1%)	20 (29.4%)
Searching bibliographic databases	2 (2.9%)	19 (27.9%)	5 (7.3%)	26 (38.2%)	15 (22%)
Searching full text databases	2 (2.9%)	21 (30.8%)	10 (14.7%)	16 (23.5%)	18 (26.4%)
Following citations, bibliographic references	00	27 (39.7%)	7 (10.2%)	23 (33.8%)	11 (16.1%)
Relying on alerting services (based on a personal profile)	3 (4.4%)	20 (29.4%)	9 (13.2%)	26 (38.2%)	12 (17.6%)

Table 6.13 shows the identification of the relevant electronic journals accessed by INFED. It is clear that the majority of users (35.2%) often use browsing through recent issues, majority of users (38.2%) rarely searching from bibliographic databases, 30.8% of users often use full-text database searching, 39.7% of users often following citations and bibliographic references, (38.2%) users rarely rely on alerting services.

Table 6.14 Facing problem while accessing e-resources through INFED

Particular	Number of respondents	Percentage
Yes	24	35%
No	20	30%
May be	24	35%

Table 6.14 shows that 35% of users face problems while using INFED, 30% of users are not confronted with any issues, While 35% of users feel that there may be problems at the time of use.

TABLE 6.15: Problems while accessing e-resources through INFED

Particular	Number of respondents	Percentage
Lack of IT skills	20	29.4%
Poor connectivity	47	69.1%
Complex system tools	17	25%
Less number of system in University-campus	11	16.1%
Fluctuation in electricity	14	20.5%
Lack of personal system	11	16.1%
Less familiar with e-learning	8	11.7%
Uneven source quality	8	11.7%
Lack of information available related to my field	22	32.3%
Individual problem	16	23.5%

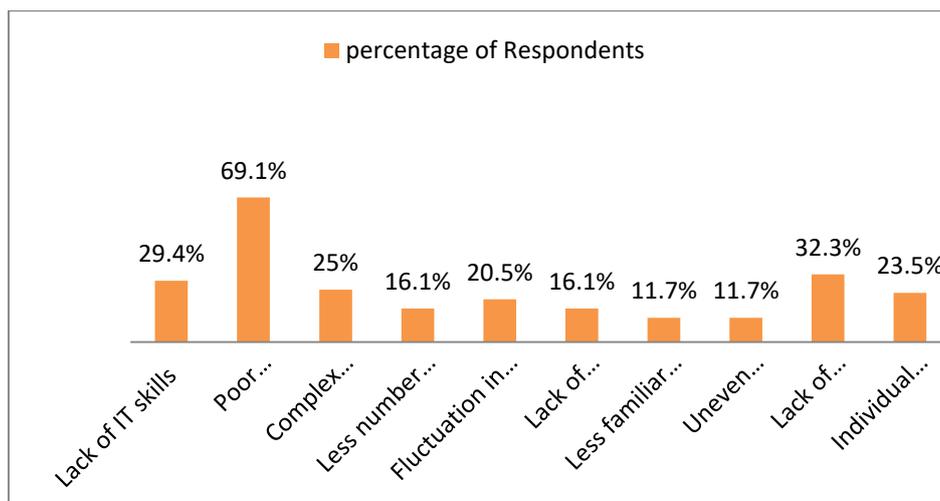


Figure 3.

Table 6.15 or Figure 3. shows that problems faced by the users of the library while using INFED, The maximum number of user faces the problem of poor connectivity (69.1%), the other problem faced by the users (32.3%) is that they face lack of information available related to their field. 29.4% of users faces incapability to use system operations, i.e., means they are not aware of the features of INFED etc., and the other problems discuss in the above table.

TABLE 6.16: Overall user's personal experience while using through INFED

Ratings	Number of respondents	Percentage
Highly Dissatisfied	5	7.3%
Dissatisfied	5	7.3%
Moderately	18	26.4%
Satisfied	29	42.6%
Highly Satisfied	11	16.1%

Table 6.16 shows that 42.6% of the users are satisfied with the INFED services. 26.4% of users are moderately satisfied, and 16.1% are highly satisfied, along with 7.3% of users who have given the same response on dissatisfied and highly dissatisfied.

6. FINDINGS:

The followings findings of this study can be summarized as follows:

- The first findings revealed that maximum male respondents are involved in this study.
- In this study, the maximum respondents are between the age of 25-30 years.
- 83.9% of respondents are aware of using e-resources access through INFED.
- 67.6% of users use INFED e-resources for research purpose.
- Maximum users (48.5%) use Taylor and Francis databases, followed by Springer Link database, JSTOR database, Emerald and Oxford university press and others.
- Most of the respondents face problems while accessing e-resources, i.e. poor connectivity, lack of information available related to my field, lack of IT skills, etc.

7. CONCLUSION:

This initiative of BBAU is playing a significant role for research scholars. INFED e-resources can be accessed not only by those who are present in university but also by those who are off campus. This study concludes that maximum users are aware and use INFED e-resources. Users access these resources to enhance the research activity. At the time of accessing, users have also faced some problems, i.e. poor connectivity, lack of information related to their field, lack of IT skills etc. Despite this, users are satisfied with INFED e-resources. This study suggests that library should organise training programme to maximum use and also publishers should conduct any workshop for training and database orientation.

REFERENCES:

1. Baikady, M. R., Jessy, A., and Shivananda, B. K. (2014). Off campus access to licensed e-resources of library: A case study. *DESIDOC Journal of Library & Information Technology*, 34(6), 486-490.
2. Bajpai, P.N. (2017). *Use and management of electronic resources in select special libraries of Delhi NCR*. (Doctoral Thesis) Retrieved from <https://shodhganga.inflibnet.ac.in/handle/10603/202906>
3. Islam, S., Alam, S., and Sultana, S. (2011). Access and usage of electronic journals in Dhaka University Library (DUL) : An empirical study. *Journal of the Bangladesh Association of Young Researchers (JBAYR)*, 1(2), 30-47. Retrieved from DOI: 10.3329/jbayr.v1i2.1002.
4. Jogan, S. N. (2015). Access, awareness and use of electronic resources by post graduate students in Gulbarga University. *International Journal of Informative and Futuristic Research*, 2(6), 1540-1547.
5. Joshua, D. and King, L. (2020). The Utilization of e-resources at Modibbo Adama University of Technology (MAUTech), Yola, Adamawa State, Nigeria. *International Journal of Knowledge Content Development & Technology*. 10(1), 47-70.
6. Mangayarkarasi, A., and R. Sarangapani. (2017). A study of utilization on web based resources for women scholars in Bharathiar University in Coimbatore. *Indian Journal of Information Sources and Services*, 7(1), 21- 24.
7. Parmar, S. (2019). Utilization of E-Resources and Databases in Agricultural and Veterinary Universities of Hisar, Haryan. *Library Philosophy and Practice (e-journal)*.
8. Retrieved from <http://www.bbau.ac.in/>
9. Retrieved from www.bbau.ac.in/new/library.aspx
10. Retrieved from infed.inflibnet.ac.in/about.php
11. Sawai, A. B. and Chavan, S.P. (2020). Awareness and Use of E-Resources in College Libraries: A Survey. *Library Philosophy and Practice (e-journal)*. Retrieved From <https://digitalcommons.unl.edu/libphilprac/3629>
12. Singh, K. (2019). Awareness and Use of e-resources among the Users of Library of Punjabi University
13. Patiala: A Case Study. *Journal of indian library association*. 55(4)
14. Singh, P. K. and Gupta, S. (2020). Awareness and Use of E-Resources by MBBS Students in Government Medical College, Jammu. *International Journal of Applied Social Science*. 7 (11&12), 495-501.
15. Srinivasulu, P., Chinna Balu, C. and Narendra, A. (2019). Awareness and Usage of e-resources by faculty members at Vardhaman College of Engineering (Autonomous), Hyderabad: A Study. Retrieved From <https://www.proquest.com/openview/7c2a8bef7b2bfc66573783f78f8b6932/1?pq-origsite=gscholar&cbl=54903>
16. Wijetunge, P. (2017). Usage of electronic resources by librarians of Sri Lankan universities. *Annals of Library and Information Studied*, (64), 21-27.