

A Study Of Usage Of Electronic Databases In Hemwati Nandan Bahuguna Garhwal University, Uttarakhand

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Abstract

The aim of this study is to ascertain why electronic databases are used, how often they are used, how satisfied users are with their experience, and what issues users have when trying to access the electronic databases at the central library of Hemwati Nandan Bahuguna Garhwal University in Uttarakhand. Faculty members and research experts were surveyed, and the results were examined. Based on this analysis, the study found that faculty members and research scholars primarily used electronic databases including Springer Link, Taylor & Francis, and Science Direct. The results showed that in order to improve the use of the university's existing databases, user education and information literacy programs are required.

Keywords: Electronic Databases, Electronic Resources, Utilization, Central University.

Introduction

The integration of ICT, electronics, and reprography has led to the development of a new technological invention that has been implemented in libraries and has also become a part of our daily lives. In recent times, Information and Communication Technology (ICT) has revolutionised the methods of accessing and utilising information. It has a significant impact on many aspects of human existence and offers a diverse range of methods for presenting information, including textual, numerical, visual, and audio formats. ICT encompasses the activities of generating, storing, manipulating, retrieving, and transmitting information. The advent of electronic technologies has led to the emergence of databases, which are varied systems used for data storage and retrieval. Generally, a database refers to a well-structured compilation of information.

A database is a structured collection of data kept in a computer that can be automatically searched. A computerised record-keeping system that efficiently stores and retrieves information, enabling anyone to access information rapidly. The data includes useful information such as physical properties, statistical/numerical data, bibliographical information, and non-bibliographical information. The data is organised into fields, each of which comprises words and numbers. This allows for efficient searching of terms within certain fields. Databases are designed to allow all users to access all data using a single software package.

Electronic Database

Electronic databases can be accessible worldwide through the internet. It functions as an electronic information service or database that offers accurate information efficiently and with more flexibility. These are comprehensive repositories of information accessible to any user with a computer terminal. They comprise a collection of abstracts or whole texts and can provide answers to queries without the need

for additional references. By utilising specialised computer programs, one can conduct thorough searches and investigations, enabling the user to engage in interactive and reciprocal conversations or dialogues with the computer. Electronic databases encompass several categories such as bibliographic databases, numeric databases, full-text databases, picture databases, and others. Currently, electronic databases are crucial due to their up-to-date nature and ability to be accessible without any geographical limitations.

Review of Related Literature

Habib, Saba, Asad, Iqbal Hussain, and Bahader, Mir (2022) described how familiar the users are with and what difficulties they face in using the Medical College Library of Multan Division, Pakistan. For this study, a questionnaire was distributed to six medical and dental colleges through surveys and data collection, with an 88 percent response rate. The study revealed that the users were slightly aware and using electronic databases and did not even know about various electronic databases related to their discipline and they were also partially satisfied. It was also revealed from the study that this was due to poor e-resource utilization and inadequate training and orientation.

Kavitha, A.K. and Kavitha, R. (2022) conducting this study was to find out the usage, satisfaction level and reasons for e-resources by faculty members of arts and science colleges in selected colleges of Coimbatore district, Tamil Nadu. Questionnaires were distributed to faculty members of arts and science colleges using the survey method to collect the data. The study showed that 60% of users were satisfied with e-books, 56% with e-journals, and 37% with electronic databases. Furthermore, the study revealed that the satisfaction level of e-resources with respect to electronic databases was as follows: The most satisfied users were INFLIBNET/N List (49%), EBSCO (42%), DELNET (38%), Elsevier (34%), and Sage Electronic (32%). In general, faculty

members used electronic databases, e-books, and e-journals more.

Norch, Collins Kwadwo and Adzakpa, Kafui Afi (2022) investigated the use of library electronic resources by postgraduate students at the University of Ghana, and Questionnaire method was adopted for the study, The study revealed that 41.2% were aware of institutional repositories and 37.7% were aware of electronic databases, while 6.1% responded that they were not aware of electronic databases, and most people learned about this electronic database through the library orientation program. The result also confirms that the most widely used institutional repositories; the analysis also revealed that institutional repositories were used more for dissertations. Apart from this, users also faced the problem of choosing the best sources, due to which they found it difficult to find relevant content.

Verma, Sapna (2016) focusses on the utilisation of electronic databases by postgraduate students and their degree of awareness. Additionally, it examines their satisfaction with the support offered by the Central Science Library (CSL) in accessing these databases. The majority of users are knowledgeable and effectively utilising electronic databases for their study and to enhance their understanding of various subjects. However, their utilisation of the electronic database is hindered by a dearth of information. The most commonly utilised databases among users include Science Direct, Springer Link, and Web of Science, among others.

Khan, Saima and Haridasan, Sudharma (2015) explored the utilisation and objective of employing electronic databases among the users of the Faculty of Arts at Aligarh Muslim University (AMU) and the University of Delhi (DU). It reveals from the study that users of DU are more aware and use electronic database in comparison to the users of AMU. The majority of users using the electronic database to access material for their teaching and research endeavours. The two most commonly utilised databases are Annual Reviews and J-

STOR. It is evident that libraries should organise awareness programs and provide training for both staff and users.

Md. Sohail and Alvi, Andleeb (2014) observed that the internet has experienced significant expansion in both the quantity and diversity of information resources, which are crucial for academic scientific writing. All students, without exception, are fully aware of the existence of web resources. Furthermore, they express satisfaction with these tools and regularly utilise them for their academic tasks. A plethora of scientific and medical research, as well as a multitude of information resources, may be accessed on the internet. Online, students have access to a diverse array of information and links to further resources. They have the ability to utilise cutting-edge technology to quickly and accurately obtain important information. In the modern era, it is imperative to equip students with computer and internet capabilities, educate them about information resources, and teach them how to effectively use these resources for their research work and for the progress of the country.

Uma, V. (2014) described that, the use of electronic databases by faculty members and research researchers is characterised in terms of priority and ranking of databases. The findings indicate that a large proportion of the participants from both universities has knowledge and understanding of electronic database utilisation. Users reported that they gather information for their research work solely from electronic resources, without the need to visit libraries. Some of the prominent scientific databases are Science Direct, SciFinder, SCOPUS, Science Electronic, and Biological Abstracts. The American Chemical Society is the predominant electronic database utilised in universities. Less commonly utilised databases include MathScinet, Taylor and Francis, AIP, RSC, Blackwell Synergy, and J-Gate.

Objectives of the Study

The study has been designed with a view to achieving the following objectives:

- To identify the extent of awareness and usage of electronic databases by the faculty members and research scholars.
- To determine the purpose for which electronic databases used by faculty members and research scholars.
- To find out the most frequently used databases by the users.
- To identify the searching techniques/methods used to retrieve the information from electronic databases.
- To determine the impediments faced by the users while accessing and using the electronic databases in the library.
- To know the satisfaction level of the users and recommend appropriate solutions regarding the effective use of available electronic databases.

Scope and Limitation

The scope of the study is limited to the users (faculty members and research scholars) of central library of Hemwati Nandan Bahuguna Garhwal University concerning the effective use of electronic databases.

Methodology

The study is based on survey (questionnaire). The investigator visited the central library and approached the faculty members and research scholars. A structured questionnaire was designed to collect data from them keeping in mind the objectives of the study. The

questionnaire was distributed and collected personally from respondents with the help of library staff either on the spot or after few days.

Data Analysis and Interpretation

200 questionnaires were circulated among the faculty members of HNBSU. Out of these, 167 questionnaires, or 83.5%, were returned and filled up. However, 17 questionnaires were discarded due to incomplete information. Ultimately, the investigator chose 150 questionnaires, which represents 75% of the total number of completed questionnaires, for the study. Similarly, a total of 200 questionnaires were issued to the research scholars of HNBSU. Out of these, 170 questionnaires, which accounts for 85% of the total, were returned and filled up. However, 20 questionnaires were rejected due to incomplete information. Consequently, the investigator chose 150 fully completed questionnaires, which accounts for 75% of the total, for analysis.

Table 1: Frequency of visiting the library

Frequency	Faculty Members	Research Scholars
Daily	70 (46.66%)	40 (26.66%)
Weekly	45 (30%)	80 (53.33%)
Monthly	25 (16.67%)	23 (15.34%)
Occasionally	10 (6.67%)	7 (4.67%)

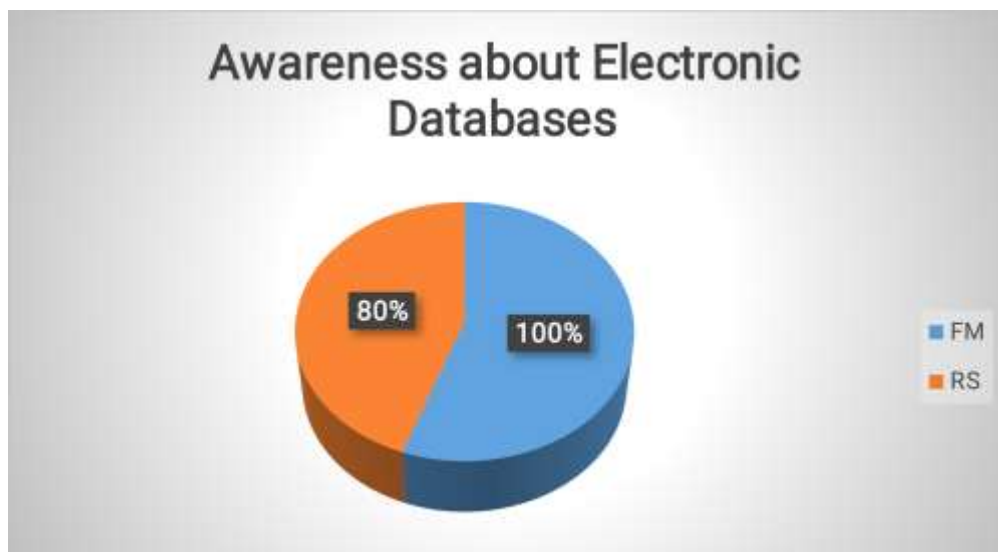
Table 1 shows that 46.66% and 30% faculty members visit the library daily and weekly, whereas 53.33% and 26.66% research scholars visit library weekly and daily. It is clearly visible from the table good percentage of respondents are visiting the library daily and weekly.

Table 2: Purpose of Using the Library

Purpose	Faculty Members	Research Scholars
Borrowing books	97 (64.66%)	80 (53.33%)
Consulting print Periodicals/Journals	59 (39.33%)	57 (38%)
Consulting electronic databases	51 (34%)	66 (44%)
Consulting other resources	20 (13.33%)	20 (13.33%)

According to Table 2, 64.66% of faculty members utilise the library for borrowing books, 39.33% consult print Periodicals/Journals, and 34% consult electronic databases. Conversely, 53.33%, 44%, and 38% of research researchers utilised the library for the purposes of borrowing books, accessing electronic databases, and consulting print periodicals/journals, respectively. According to the table, the goal of utilising the library is almost identical among the users. The library is utilised for the purpose of borrowing books, examining journals, and accessing electronic databases.

Fig I. Awareness and Use of Electronic Databases



A large number of electronic databases are being subscribed by the central library. Fig. 1 depicts that 100% of faculty members and 80% of research scholars are aware about the available electronic database and use it to collect their needed information.

Table 3: Purpose of Using Electronic Databases

Purpose	Faculty Members	Research Scholars
For study/teaching work	101 (67.33%)	10 (6.66%)
For research work	3 (2%)	135 (90%)
To update knowledge	89 (59.33%)	95 (63.33%)
For career development	66 (44%)	79 (52.66%)
To support other academic work	25 (16.66%)	5 (3.33%)

Table 3 clearly indicates that 67.33% and 59.33% of faculty members utilise electronic databases for their study and teaching activities, as well as for staying updated with knowledge. Conversely, 90% and 63.33% of research researchers utilise electronic databases for their study and to stay informed. Furthermore, the table indicates that respondents utilise electronic databases to enhance their expertise and carry out their fundamental tasks.

Table 4: Material search from the Electronic Databases

Material	Faculty Members	Research Scholars
Books	50 (33.33%)	70 (46.66%)
Journals articles	112 (74.66%)	125 (83.33%)
Conference Papers	70 (46.66%)	55 (36.66%)
Theses/ Dissertations	2 (1.33%)	83 (55.33%)
Case Studies	15 (10%)	30 (20%)
Patents	10 (6.66%)	9 (6%)

Table 3 clearly demonstrates that 67.33% and 59.33% of faculty members using electronic databases for their study and teaching endeavours, as well as for remaining informed and up-to-date. On the other hand, 90% and 63.33% of researchers use electronic databases for their study and to stay updated. Additionally, the table shows that respondents use electronic databases to improve their knowledge and perform their essential duties.

Table 5: Advantages of Electronic Databases

Advantage	Faculty Members	Research Scholars
Less time in searching	70 (46.66%)	73 (48.66%)
Easy accessibility	133 (88.66%)	125 (83.33%)
Simultaneous Facility	19 (12.66%)	35 (23.33%)
Downloading Facility	29 (19.33%)	67 (44.66%)
Archival Facility	31 (20.66%)	21 (14%)
Access to current/ up-to-date information	124 (82.66%)	89 (59.33%)
Access to wider range of information	87 (58%)	80 (53.33%)

The data in table 5 indicates that 88.66% of faculty members and 82.66% of research scholars prefer electronic databases because they are easily accessible and provide up-to-date information. Similarly, 83.33% of faculty members and 59.33% of research scholars also favour electronic databases for the same reasons. The preceding analysis indicates that respondents are utilising electronic databases due to their convenient accessibility.

Table 6: Problems in Using Electronic Databases

Problems	Faculty Members	Research Scholars
Slow access speed	101 (67.33%)	112 (74.66%)

Difficulty in finding relevant information	89 (59.33%)	95 (63.33%)
Lack of training related to electronic databases	25 (16.67%)	67 (44.66%)
Lack of IT knowledge	-	9 (6%)
Non-Supporting staff	10 (6.66%)	35 (23.33%)

Table 6 displays significant challenges encountered by respondents when use electronic databases. 67.33% and 59.33% of faculty members and 74.66% and 63.33% of research scholars had sluggish internet speed and encountered challenges in locating pertinent information.

Table 7: Satisfaction Level of Electronic Databases

Satisfaction	Faculty Members	Research Scholars
Fully	100 (66.66%)	90 (60%)
Partially	36 (24%)	43 (28.66%)
Least Satisfied	10 (6.67%)	10 (6.67%)
Not Satisfied	4 (2.67%)	7 (4.67%)

The data shown in Table 7 indicates that a significant proportion of respondents express complete satisfaction with electronic databases. The data indicates that 66.66% of faculty members and 60% of research scholars express complete satisfaction, whereas 24% of faculty members and 28.66% of research scholars report moderate satisfaction with electronic databases.

Summary of Findings

This part comprehends major findings on the basis of the analysis and interpretation of the collected data from users of the university library under study:

- It is noted that a significant proportion of academic members visit the library on a daily basis. Conversely,

a significant proportion of research researchers visit the library on a weekly basis.

- Many users, including academic members and research scholars, have a common aim for utilising the library, which is to borrow books.
- 100% of faculty members in the university library and over 80% of research scholars are aware of the availability of electronic databases.
- A significant proportion of users acknowledge that they receive sufficient training from the library on how to use electronic databases.
- Libraries offer a range of electronic databases to users in order to distribute many forms of information. Regarding electronic databases, Springer Link is ranked top, Taylor & Francis is ranked second, and Science Direct is ranked third. These databases are commonly used by both faculty members and research scientists. In addition to these, Nature, J-STOR, and Cambridge University Press are commonly utilised electronic databases.
- Journal articles are the most often sought-after content in electronic databases. Typically, faculty members and research academics primarily seek for journal articles, followed by conference papers and theses/dissertations.
- It has been noticed that the majority of faculty members and research researchers at the university library consider Boolean operator as the most favoured search tool.
- Respondents encountered significant difficulties while attempting to use electronic databases. The majority of respondents frequently encountered issues with sluggish access speed and struggled to locate pertinent information.
- It has been noted that a majority of 60% of faculty members and research scientists express complete satisfaction with electronic databases.

Conclusion and Recommendation

The field of information and communication technology has given faculty members and research scholars the ability to generate, comprehend, and disseminate the vast amount of information that is available globally. The study revealed that the faculty members and research scientists who participated were well knowledgeable about electronic databases. Most faculty members and research scientists prioritise the timeliness, probability, and convenience of use while using electronic databases for information. Most faculty members and research scholars opt to utilise electronic databases for both study/teaching and research purposes, as well as to stay up-to-date with knowledge. The advent of electronic databases has provided the academic community with a new avenue. The study indicates that a small proportion of respondents are content with the electronic database service offered by the university library. It is evident that an electronic database plays a crucial role in the academic and scientific community. It has become an integral component of libraries, providing help to users in the areas of teaching, learning, and research. It is the library's duty to stay updated with technological advancements and meet the needs of its consumers. The value of accessibility and usability of electronic databases is enhanced when they are readily available in the relevant format during work.

References

1. Aina, Rachael Folashade (2014). Awareness, accessibility and use of Electronic Database among Academic staff of Babcock University Business School. Kuwait Chapter of Arabian Journal of Business and Management Review. 3 (6), p. 40-47.
2. Bhat, Iqbal and Mudhol, Mahesh (2014). Use of E-resources by Faculty Members and Students of Sher-E-Kashmir Institute of Medical Science (SKIMS). DESIDOC

- Journal of Library & Information Technology. 34 (1), p. 28-34.
3. Jotwani, Daulat (2014). Marketing of Electronic Resources in IIT Libraries. DESIDOC Journal of Library & Information Technology. 34 (2), p. 162-169.
 4. Kachaluba, Sarah Buck, Brady, Jessica Evans and Critten, Jessica (2014). Developing Humanities Collections in the Digital Age: Exploring Humanities Faculty Engagement with Electronic and Print Resources. College & Research Libraries. 75 (1), p. 91-108.
 5. Khan, Saima and Haridasan, Sudharma (2015). Use of Electronic Database in the Faculty of Arts at Aligarh Muslim University and University of Delhi. International Research: Journal of Library & Information Science. 5 (1), 1-16.
 6. Mangi, Leela Dhar (2014). Utilization of Database in State Agricultural Universities of Jammu and Kashmir (India). IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS). 7 (4), Ver. III, 1-8. Available at www.iosrjournals.org.
 7. Md. Sohail and Alvi, Andleeb (2014). Use of Web Resources by Medical Science students of Aligarh Muslim University. DESIDOC Journal of Library & Information Technology. 34 (2), p. 125-130.
 8. Uma, V. (2014). Use of Electronic Database by Faculty and Research Scholars in Science at University of Hyderabad and Osmania University: A study. Kelpro Bulletin. 18 (1).
 9. Verma, Sapna (2016). Use of Electronic Database in Central Science Library, University of Delhi: A survey. DESIDOC Journals of Library and Information Technology. 36 (2), 104-107. Available at DOI:10.14420/djlit.36.2.9409.
 10. Habib, Saba, Asad, Iqbal Hussain, and Bahader, Mir (2022). Use of Electronic Resources among Users of Medical College Libraries in Multan Division, Pakistan. Library Philosophy & Practice e-Journal, ISSN-1522-0222 <https://digitalcommons.unl.edu/libphilprac/72423>

11. Kavitha, A.K. and Kavitha, R. (2022). Usage of E-Resources among the Arts and Science College Faculties of the Selected Colleges in Coimbatore District. IJFANS International Journal of Food and Nutritional Sciences, 11 (12), pp. 3774-3782. ISSN- 2320 –7876
12. Norch, Collins Kwadwo and Adzakpa, Kafui Afi (2022). Assessing the Usage of Library Electronic Resources by Postgraduate Students at the University of Ghana Balme Library Research Common. Open Access Library Journal, 9 (e9187), pp. 1-17. ISSN- 2333-9721
<https://doi.org/10.4236/oalib.1109187>
13. <https://www.hnbgu.ac.in>
14. <http://www.wikipedia.com>