Comparative Investigation on Usage of E-Resources in Degree Colleges of Fatehabad, Haryana

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Abstract
This study endeavours to explore key aspects related to the use of electronic information resources, examining their influence on the utilization of both print and electronic sources, user awareness, and the preferred locations for accessing these resources. Conducted at different colleges of Fatehabad district of Haryana, the survey involved 100 participants who responded through a questionnaire. The results highlight a discernible pattern of users actively engaging with electronic resources, with increased awareness playing a significant role in encouraging their extensive use. Users predominantly choose departmental facilities and home environments for accessing information. Notably, the study reveals a tangible impact of electronic resources, evident in the decline of printed document usage and a simultaneous increase in the consumption of electronic materials. This underscores a notable shift towards the greater utilization of e-resources, marking a transition from traditional printed materials to electronic formats.

Keywords: Electronic Information Resources, Usage of E-resources, Library

Introduction
In the academic landscape, the adoption of electronic resources has witnessed a significant shift, particularly with the emergence of the COVID-19 pandemic. This global event has underscored the crucial role of electronic resources in facilitating worldwide information transmission. Recognizing this, there has been a growing need for comprehensive studies on the knowledge and utilization of these resources within academic institutions. The evolution from traditional to digital libraries has become a transformative force, with electronic resources now playing an integral role. This shift has been driven by advancements in Information and Communication Technology (ICT), fundamentally altering the way libraries operate and how users access information. As noted by Satpathy and Rout in 2010, the rapid progress in ICT has revolutionized the information scenario, offering diverse options for handling information sources conveniently (p.11). Traditionally, libraries served as document providers, requiring users to invest significant time in searching for information, heavily relying on the expertise of library professionals. However, the integration of information communication technology has redefined the role of libraries, with computers playing a crucial role in day-to-day operations. This integration not only saves time for both end users and library professionals but also eliminates duplication of work, contributing to a more efficient and effective library service (Habiba and Chowdhury, 2012, p.74-75). According to Lallaisangzuali (2013), the transformative impact of ICT devices, electronic databases, and e-book
technologies has been profound, prompting libraries worldwide to adapt to the escalating demand for online information access, marking a paradigm shift in their status and services (p.2). Moving to the contemporary era, there is a discernible shift from printed documents to electronic resources as users increasingly seek precise and comprehensive information. The academic system, anchored in teaching, learning, and research, heavily relies on information resources, acknowledged by Rao and Choudhury in 2009 as crucial for shaping an educated society. Education and libraries are intricately connected, collaboratively promoting and advancing teaching, learning, and research, fostering greater academic utilization (p. 630). Heterick (2002) notes that the widespread adoption of electronic resources has significantly transformed the methods by which the academic community engages, stores, and safeguards information (p.10). In this context, Lallaisangzuali (2013) emphasizes the necessity of user awareness for staying abreast of current developments through electronic resources. These resources, in comparison to print media, provide faster and more accessible information, ensuring the timely and relevant delivery of data (p.2).

Operational Definitions

1. Use
For the study, the term ‘use’ refers to searching, browsing, examining, and obtaining information from e-resources available in the library and on the Internet by the user.

2. E-Resources
E – Resources refers to a material consisting of data or computer programs encoded for reading and manipulated by computer using the peripheral device are directly connected to the computer or remotely via a network such as the Internet. E-resources is a broad term of digital information that comprises resources such as databases, e-journals, e-books, websites, full-text articles, and other information that is available digitally.

Types of E-Resources
There are diverse types of e-resources. Some of them are listed hereby:
- E-books
- E-journals
- E-Standards
- Multimedia products
- E-Reports
- Electronic Reference Sources
- Databases
- CDs/DVDs
- E-conference proceedings
- E-Maps
- E-Theses/Dissertations
- E-Newspaper

Objectives of the Study
For the study, the subsequent objectives have been proposed:
1. To investigate the responsiveness and utilisation of e-resources among users.
2. To analyse how frequently, for how long, and for what reason users utilise e-resources.
3. To determine the extent to which users use e-resources.
4. To assess how satisfied users are with their utilisation of e-resources.
5. To highlight the issues and possibilities for increasing usage of e-resources.

**Scope of the Study**
The scope of current investigation is restricted to users of degree colleges of Fatehabad. These colleges have a common goal in their act. Moreover, the evolution patterns of these resemble in many ways including facilities, academic departments, faculty positions, etc. Hence, it is vital to make a relative study among well-established colleges which has some common goals and objectives. The study will include the samples from users of degree colleges of Fatehabad.

**Population**
All the degree colleges of Fatehabad district in Haryana constitute the population of research.

**Sample size**
Total No of sample size = 100

**Hypotheses of the Study**
1. There is no substantial difference in the pattern of use of e-resources in various degree colleges.
2. There is no significant difference in the satisfaction level of the users with regard to infrastructural facilities for e-resources.
3. The users prefer print resources than the e-resources.
4. The factors acting as hindrance in use of e-resources are different among users of different colleges.
5. The user education for e-resources is not sufficient and the users lack awareness.

**Justification of Problem**
Libraries are crucial for education, offering high-quality, easily accessible collections to support research and training programs. These collections, including books, magazines, and digital resources, play a vital role in distributing information. As we transition to the digital era, efficient use of both library and external e-resources becomes essential. This study examines internet resource utilization in Fatehabad's degree colleges to meet evolving needs.

**Statement of the Problem**
“Comparative investigation on usage of E-Resources in degree colleges of Fatehabad, Haryana.”

**Scope of the Study**
The scope of current investigation is restricted to users of degree colleges of Fatehabad. These colleges have a common goal in their act. Moreover, the evolution patterns of these resemble in many ways including facilities, academic departments, faculty positions, etc. Hence, it is vital to make a relative study among well-established colleges which has some common goals and objectives. The study will include the samples from users of degree colleges of Fatehabad.
Research Methodology
The study employs stratified random sampling to collect data from Fatehabad's degree college users. It adopts a survey method, using a designed questionnaire distributed among users. Data collection involves personally administering the questionnaire in the field. Analysis utilizes descriptive statistics and relevant statistical techniques

I. Survey of Libraries
A structured questionnaire was framed with 46 questions to know the various aspects of libraries E-Resources, ICT infrastructure of the library, to know the subscribed e-resources available.

II. Survey of Respondents
A structured questionnaire was framed with 46 adequate questions related to the study and circulated to users of degree colleges of Fatehabad to obtain required information with regards to assessment of the use of e-resources. A total of 100 questionnaires were distributed to users in the context of the use of E-Resources.

Limitations of the Study
1. This study will be limited to Fatehabad region of Haryana state.
2. The study is confined to the users of degree colleges only.

Review of Literature
Bhanu Partap and Ranga's (2021) study at Chandigarh College found strong awareness and use of e-resources, yet highlighted challenges with over 50% facing issues in downloading and 49% in content search, emphasizing the need for ongoing surveys to enhance services. Krishnappa's (2020) study on internet resource use in Karnataka among researchers and faculties found Google to be the preferred search engine for the majority, with a focus on research, email, and communications, indicating high satisfaction levels. In their 2019 study on Nigerian tertiary institutions, Suleiman and Johua found that academic staff, though aware of available internet resources, had limited knowledge beyond email services. The most widely used web resources were online databases, revealing a need for enhanced understanding and utilization of online services among academics. In 2017, Uloaku studied internet use in two Kaduna state special libraries, highlighting scholars' reliance on it for research, accessing e-journals, and communication. Identified challenges included slow internet, lost networks, and insufficient connecting systems, underscoring the need for improved speed, increased bandwidth, and better services for the research community's benefit. Emeka and Nyeche (2016) found the Internet positively impacts students' academic performance, emphasizing the need for user orientation programs in university libraries to enhance efficient use of electronic resources. Ansari's (2020) study at Banaras Hindu University reveals that literature research scholars, while generally aware of e-resources, face challenges such as technical knowledge gaps and slow internet speed, suggesting a need for improved library facilities and services. In 2011, Thanuskodi investigated electronic resource usage at Dr. T.P.M. Library, Madurai Kamaraj University, finding that M.Phil. students engaged most, followed by postgraduates, and Ph.D. scholars the least. The study recommends improving access facilities, emphasizing high-speed internet and expanding the subscriber base for electronic information resources at the university.
Data Analysis and Interpretation

Hypothesis No 1
There is no substantial difference in the pattern of use of e-resources in various degree colleges.

Interpretation
The users using various types of e-resources is a significant indicator of how they are utilised the available e-resources. A question was asked how frequently they used available e-resources using a time scale that includes 5: Daily, 4: More than twice in a week, 3: Once in a week, 2: More than twice in a month, 1: Once in a month’. 15.12% of users use e-resources daily, 20.18% of users use e-resources more than twice a week, 32.14% of users’ uses e-resources once in a week, and 32.56 % of respondents of library uses e-resources more than twice in a month.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Pattern of use of e-resources</th>
<th>Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Daily</td>
<td>15.12</td>
</tr>
<tr>
<td>2</td>
<td>More than twice in a week</td>
<td>20.10</td>
</tr>
<tr>
<td>3</td>
<td>Once in a week</td>
<td>32.13</td>
</tr>
<tr>
<td>4</td>
<td>More than twice in a month</td>
<td>22.36</td>
</tr>
<tr>
<td>5</td>
<td>Once in a month’</td>
<td>10.21</td>
</tr>
</tbody>
</table>

Difference in the pattern of use of e-resources in various degree colleges.

Hypothesis No 2
There is no significant difference in the satisfaction level of the users with regard to infrastructural facilities for e-resources.

Interpretation
The opinion about the problem faced while accessing e-resources by the users, 65.49% of respondents s faced problems while using/ accessing E-Resources and 34.51% of respondents of library did not face any problem while using/ accessing e-resources.
Hypothesis No 3
The users prefer print resources than the e-resources.

Interpretation
The preferred formats of information resources by the library users of degree colleges, has been found that 47.61% of Users prefer both print and electronic formats of information resources, followed by 33.24% of Users prefer only electronic formats of information resources and 19.15% of Users prefer only print formats of information resources.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Preference of use of e-resources</th>
<th>Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Both print and electronic</td>
<td>47.61</td>
</tr>
<tr>
<td>2</td>
<td>Only Electronic resources</td>
<td>33.24</td>
</tr>
<tr>
<td>3</td>
<td>Only Print resources</td>
<td>19.15</td>
</tr>
</tbody>
</table>

Preference between print resources and e-resources

Hypothesis No 4
The factors acting as hindrance in use of e-resources are different among users of different colleges.

Interpretation
Table below shows that the opinion about the problem faced while accessing e-resources by the users. 65.49% of respondents faced problems while using / accessing E-Resources and 34.51% of respondents did not face any problem while using/ accessing e-resources. It observed that 45.76% of Users faced problem of poor connectivity (low bandwidth) while accessing e-resources, followed by 39.45% users faced problem of retrieval of irrelevant/ junk information while accessing e-resources, 18.35% users faced the problem of unfamiliar file formats and non-availability of latest software while accessing e-resources, 17.61% of users faced problem of unorganized information content while accessing e-resources, 24.34% of users faced problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, 17.42% of users faced problem of change in URL while accessing e-resources, 25.43 % of users faced problem of change of the content/ information while accessing e-resources/ unauthorized information, 12.10% of users faced problem of lack of support / assistance from library staff while accessing e-resources, 6.75% of users faced other problem while accessing e-resources.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Problems</th>
<th>N0 of Users (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poor Internet connectivity ( Low Speed)</td>
<td>45.76</td>
</tr>
</tbody>
</table>
2. Retrieval of irrelevant/junk information while accessing e-resources
3. Unfamiliar file formats and non-availability of latest software
4. Lack of IT knowledge to effectively utilize the service/e-resources
5. Changes in URL
6. Lack of authenticity/Reliability
7. Lack of support from staff
8. Any other

Hypothesis No 5
The user education for e-resources is not sufficient and the users lack awareness.

Interpretation
The responses towards the methods through which the users come to know about e-resources are depicted in Table Below. The users were allowed to choose multiple responses. Among the users, the most common method through which they become aware about e-resources is “by browsing or looking for materials” 64.7%. Other methods of awareness are “cited in report/journals/conference papers” 58.50%, “e-mail alerts from publishers/distributors, etc.” 59.28%, “by personal communication with friends, subject experts and resource persons” 67.62% and “by searching bibliographic database” 52.73%.
The methods that contribute less towards e-resource awareness are “announcements in journals” 28.82% and “reference from the librarian” 14.95%. The most common method used by the research scholars for knowing the e-resources is “by browsing or looking for materials” 79.78%. Other methods of e-resource awareness includes “by personal communication with friends, subject experts and resource persons” 72.56% and “cited in report/ journals/ conference papers” 55.64%. The methods through which only some research scholars come to know about e-resources are “e-mail alerts from publishers/ distributors, etc.” 32.91%, “by searching bibliographic database” 32.13%, “announcements in journals” 20.75% and “reference from the librarian” 11.45%.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Awareness</th>
<th>% of Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Browsing or looking for materials</td>
<td>64.7</td>
</tr>
<tr>
<td>2</td>
<td>cited in report/ journals/ conference papers</td>
<td>58.50</td>
</tr>
<tr>
<td>3</td>
<td>E-mail alerts from publishers/ distributors</td>
<td>59.28</td>
</tr>
<tr>
<td>4</td>
<td>Personal communication with friends, subject experts and resource persons</td>
<td>67.62</td>
</tr>
<tr>
<td>5</td>
<td>Searching bibliographic database</td>
<td>52.73</td>
</tr>
<tr>
<td>6</td>
<td>Announcements in journals</td>
<td>28.82</td>
</tr>
<tr>
<td>7</td>
<td>Reference from the librarian</td>
<td>14.95</td>
</tr>
</tbody>
</table>

Main Findings
Findings According To the Objectives of the Study
1. Most of respondents (32.56%) of library uses e-resources more than twice in a month. 32.14% of users’ uses e-resources once in a week, 20.18% of users use e-resources more than twice a week and 15.12% of users use e-resources daily. So, there is substantial difference in the pattern of use of e-resources in various degree colleges.
2. Most of respondents (65.49%) faced problems while using/ accessing E-Resources and 34.51% of respondents of library did not face any problem while using/ accessing e-resources.

3. So, there is significant difference in the satisfaction level of the users with regard to infrastructural facilities for e-resources.

4. The preferred formats of information resources by the library users of degree colleges, has been found that 47.61% of Users prefer both print and electronic formats of information resources, followed by 33.24% of Users prefer only electronic formats of information resources and 19.15% of Users prefer only print formats of information resources. So the assumption of user preference about print resources than the e-resources is wrong.

5. Most of respondents (65.49%) faced problems while using / accessing E- Resources and 34.51% of respondents did not face any problem while using/ accessing e-resources. It observed that 45.76% of Users faced problem of poor connectivity (low bandwidth) while accessing e-resources, followed by 39.45% users faced problem of retrieval of irrelevant/ junk information while accessing e-resources, 18.35% users faced the problem of unfamiliar file formats and non-availability of latest software while accessing e-resources, 17.61% of users faced problem of unorganized information content while accessing e-resources, 24.34% of users faced problem of lack of IT knowledge to effectively utilize the service/ e-resources while accessing e-resources, 17.42% of users faced problem of change in URL while accessing e-resources, 25.43% of users faced problem of change of the content/ information while accessing e-resources/ unauthorized information, 12.10% of users faced problem of lack of support / assistance from library staff while accessing e-resources, 6.75% of users faced other problem while accessing e-resources. So the factors acting as hindrance in use of e-resources are different among users of different colleges.

6. Among the users, the most common method through which they become aware about e-resources is “by browsing or looking for materials” 64.7%. Other methods of awareness are “cited in report/ journals/ conference papers” 58.50%, “e-mail alerts from publishers/ distributors, etc.” 59.28%, “by personal communication with friends, subject experts and resource persons” 67.62% and “by searching bibliographic database” 52.73%. The methods that contribute less towards e-resource awareness are “announcements in journals” 28.82% and “reference from the librarian” 14.95%. The most common method used by the research scholars for knowing the e-resources is “by browsing or looking for materials” 79.78%. Other methods of e-resource awareness includes “by personal communication with friends, subject experts and resource persons” 72.56% and “cited in report/ journals/ conference papers” 55.64%. The methods through which only some research scholars come to know about e-resources are “e-mail alerts from publishers/ distributors, etc.” 32.91%, “by searching bibliographic database” 32.13%, “announcements in journals” 20.75% and “reference from the librarian” 11.45%. So the assumption, “The user education for e-resources is not sufficient and the users lack awareness” is true.

**Suggestions**

Based on data analysis and findings of the study, the following suggestions are given to improve the use of e-resources among the Colleges.

1. More informative, user-friendly, and well-organised library website that makes it easy to access the e-resources should be offered.
2. The network and internet services must be strengthened by increasing bandwidth to improve the quick accessibility of available e-resources.

3. It is necessary to subscribe to more e-resources of various disciplines, besides the E-Shodh-Sindhu consortium.

4. Effective use of existing e-resources the library needs to organise several user orientation programmes for faculty members.

5. The faculty members should be trained to use advanced search techniques to found relevant information.

6. To make greater use of widely available e-resources, the central library may organise seminars, workshops, and orientation programmes for faculty members regularly to keep them up-to-date with the latest technologies.

7. The library budget should be increased to allow for the purchase of the most up-to-date e-resources, services, and databases.

**Future Area for Research**

Researchers could be done in the following areas of research for the improvement of e-resources use in all levels of teaching and from the output of the present study, the following areas are suggested for further research.

1. The present study involved the use of e-resources by users of college library, future studies can concentrate on faculty members or other users belonging to colleges.

2. A study could be repeated with research scholars and students to find the effective use of e-resources in university.

3. A comparative study could be done on faculty members in other universities and colleges.

4. A study could be done on the utilisation of e-resources regularly to enable improved collection development on a cost-effective basis.

5. It is preferable to conduct a longitudinal study to investigate the evolving patterns and trends.

6. The same study can be done in different ways, for getting a better picture of using e-resources by the faculty members.

**REFERENCES:**


