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Proceeding

Edited by
Dr. L. P. Deshmukh
Dr. Shankant J. Deshmukh
the services of the libraries are not confined within the four walls but are integrated into local, regional, national, and international Networks. Academic libraries too are now becoming hybrid libraries.

The invention of internet the World Wide Web (www) has almost brought the world very closer and shorter. The recent developments or an invention made in any part of the world is available to provide up-to-date and latest information to the users. Now the developments of e-books, e-journals have changed the library from information stackers or consumers to owners of electronic resources. Use of terminals or work stations to access databases of various kinds is now routine for many libraries, and most new adds electronic resources to their collections in CD-ROM or other form. The internet has rapidly become a global publishing platform, and electronic sources covering a wide range of subject areas are now available over the internet. The user can easily find where the electronic documents are available and also with category wise types of electronic sources details with example and URLs. There are many types of electronic information sources available: books, journals, newspapers etc. they have since evolved from magnetic tape to the microforms and then to the CD-ROM., now these are also available as DVD and don the internet.

The major information sources are found on the internet, they are-

- E-journals
- Encyclopedias
- E-Books
- Films
- Maps
- Library catalogue
- Proceedings
- Audio-video
- Old-books
- Patents
- Newspapers
- Magazines
- Dictionaries
- Websites or company, institutions, organizations, associations etc. & many more

USAGE OF ELECTRONIC JOURNALS AT NATIONAL PHYSICAL LABORATORY (INDIA): A CASE STUDY

Rajpal Walke Senior Technical Officer and N K Wadhwa Scientist, National Physical Laboratory, Dr K S Krishnan Road, New Delhi-110012, India. Correspondence: rajpalw@yahoo.com

Abstract:
The article presents a study that seeks to examine the usage of e-journals by the scientific community at NPL. The survey reveals that use of e-journals has been a huge success in improving research productivity at NPL. That e-journal has in a way sought to extend boundaries of open access system from four walls of library to whole NPL campus. The study offers suggestions on how to maximize use of e-journals collections at NPL. The study reports that both print and e-journals will continue to complement each other in scholarly communication. The shift from print to digital era has brought out new challenges before the NPL library in planning and building a hybrid library and redefining library staff roles in the emerging context.

Introduction:
Scholarly communities witnessed a major shift in journal publishing from print to electronic media during the last decade. Internet propelled this shift by making e-journals accessible online. More and more electronic journals are now appearing in all disciplines of knowledge. Libraries world over have been gradually playing active role in bringing about a shift in their collections from print to print-plus-electronic journals, or to electronic-only collections. Motivations for moving from print to e-journal or to hybrid collections include speed of journal publication, speed of access online, hyper-linked content, interactivity, online accessing and searching, multi-user searching, and budgetary considerations. Use of e-journals in academic and research institutions is growing. Seeing this trend, libraries have been undertaking fresh initiatives for enabling e-journals access within resource constraints. The Council of Scientific and
Industrial Research, the premier industrial R&D organization in India, constituted in 1942 and which has a countrywide presence through its network of national laboratories, took initiative in 2000 to set up a consortium with the objective of making e-journals published world over accessible to all its constituent laboratories. The National Physical Laboratory, being one of the constituent laboratories of the CSIR, was part of the consortium programme on e-journals. Currently, the NPL Library is providing access to 6000+ full text journals and databases under the e-consortium project of CSIR. It is over a decade since the library has been providing access to e-journals online to scientific community in the laboratory for research pursuits. This paper, therefore, attempts to look at the current trends in the use and impact of e-journals in the laboratory.

**NPL Library:**
The National Physical Laboratory is a specialized laboratory in India having interests in research and development in physical sciences. The NPL library has been a major information support to scientists for R&D pursuits, offering them a rich collection of scholarly books and journals as well as information services in physics and related sciences. The library offers online access to 6000+ full text journals and databases under the e-journal consortium project of CSIR. The laboratory has a local area network connecting 400+ thin clients located campus wide. The network is linked to Internet having 4 mbps bandwidth capacity. The computer terminals are available in the office space of the scientists, within the library and Central Computing facility. The library has high-speed wireless internet area (hot spot) for Wi-Fi connectivity on laptops. It also maintains website of the laboratory (http://www.nplindia.org) and organizes several information services to support roles and research activities of the laboratory in its thrust areas.

**E-Journals:**
There is no universally accepted definition of e-journal. Some name it as a “paperless journal,” some say it “virtual journal,” and some others as “online journal”. E-journal is also known by several other nomenclatures such as electronic journal, Internet based serial, e serial, and electronic serial. The experts in the field define e-journals based on production, distribution, etc. According to ALA glossary (2), “a journal is a periodical, especially one containing scholarly articles or disseminating current information on research and development in a particular subject fields.” If electronic media do this task then it may be called e-journal.

Lancaster (3) opined that electronic journal is created for the electronic medium.” In general, e-journals can be defined as a journal available in electronic form but accessible through online host. An electronic journal is created for the electronic medium and is available only in this medium. Jones defined e-journals as “they (journals) are available electronically via a computer or a computer network that they may or may not be published in some other (physical) medium, but that they are not CD-ROMs or diskettes(4).

The electronic journals are simply serial publications in digital format and journal contents may or may not be peer reviewed. The two media, CD-ROM and INTERNET, are used for delivery of e-journals. The main advantage of CD-ROM media is that it can be handled just like any conventional resource in physical form. Although e-journals have been under development since 1976, the first peer reviewed electronic full text journal that included graphics was *Online Journals of Current Clinical Trials (OJCCT)* (5)

**Objectives of the study:**
The main aim of this study is to understand e-journals use in NPL. The broad objectives of the study are:

1. To examine how far e-journals are being used
2. To assess the opinion of scientists on e-journals vs print journals
3. To understand the motivations for using e-journals
4. To find out how scientists use different search interfaces for accessing e-journals
5. To understand how frequently scientists use e-journals
6. To find out effectiveness of e-journals in meeting information needs of the scientists
7. To know places of access to e-journals
8. To understand to what extent scientists are aware of e-journals facility
9. To understand problems scientists face in accessing e-journals
10. To understand how to make e-journals access facility more efficient
11. To report top 20 e-journals in use in NPL

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Methodology:
For this study, questionnaire methodology has been used to collect data from a sample population of 200 scientists pursuing research programmes in NPL. The response was 60 percent, 120 questionnaires duly filled out were returned. Simple statistical tools were applied for data analysis. The research investigation is based on proper research design, properly identified sample, and standard statistical tools.

Data analysis:
Perception about e-journals: NPL Library introduced e-journals in its collections as early as 2000 and continued to work aggressively to increase their number every year. Currently, the library offers 6000+ e-journals for online access. It succeeded in leading a transition from print to digital environment in a systematic manner spanning over a period of 10 years. Currently, it is noted use of e-journals was growing because of several factors, the most important being that e-journal medium allows online access to full-text articles, and online searching saves time and effort (93.3% so responded). Nearly 63.3 percent responded that e-journals were a big factor in increasing their research productivity measured in number of studies, articles, grants, patents. Majority (85.3%) agreed that online searching had lent quality to literature searched and retrieved, leading to more precision in information retrieval. Nearly 91.6 percent found e-journals medium useful in raising awareness on current research studies, and 81.6% found hyper-linking a useful feature in non-sequential searching. Those using e-journals were more likely to remain well informed in their field of research activity (95.8% responded). The downside of e-journals is that the present search platform in use in the consortium is not as user-friendly as are expectations of the scientists from digital medium (80% responded). There have been apprehensions that e-journals will replace the traditional print media based journals. However, nearly 60 percent scientists still subscribe to the view that the library would continue to acquire journals both in print and electronic media.

<table>
<thead>
<tr>
<th>Perception</th>
<th>Agree</th>
<th>Disagree</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-journal medium helps to access and retrieve information and saves time and effort.</td>
<td>93.33% (112)</td>
<td>6.67% (8)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>E-journals can be accessed simultaneously by several users</td>
<td>100% (120)</td>
<td>0% (0)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Online users feel they are well informed</td>
<td>95.83% (115)</td>
<td>0% (0)</td>
<td>4.17% (5)</td>
</tr>
<tr>
<td>Online access to e-journals enhances research productivity (measured in number of studies, articles, grants, patents)</td>
<td>63.33% (76)</td>
<td>33.3% (40)</td>
<td>3.33% (4)</td>
</tr>
<tr>
<td>Online searching lends quality to literature searched and retrieved</td>
<td>85.33% (103)</td>
<td>9.17% (11)</td>
<td>5% (6)</td>
</tr>
<tr>
<td>E-journal medium has made current awareness to recent research easier and faster</td>
<td>91.67% (110)</td>
<td>1.67% (2)</td>
<td>6.67% (8)</td>
</tr>
<tr>
<td>E-journal medium provides other valuable features beside full text articles (e.g. hyper linking to other papers etc)</td>
<td>81.67% (98)</td>
<td>10.83% (13)</td>
<td>7.5% (9)</td>
</tr>
<tr>
<td>Online users feel they are well informed</td>
<td>95.83% (115)</td>
<td>0% (0)</td>
<td>4.17% (5)</td>
</tr>
<tr>
<td>Current search interface for online access to e-journals is user-friendly and saves time</td>
<td>3.33% (4)</td>
<td>80.0% (96)</td>
<td>16.67% (20)</td>
</tr>
<tr>
<td>Online searching increases exposure to non-peer reviewed papers</td>
<td>48.33% (58)</td>
<td>50% (60)</td>
<td>1.67% (2)</td>
</tr>
</tbody>
</table>

Figures in parentheses indicate response count in the sample survey.

Table 2: Perceptions of NPL Scientists on Survival of Print Journals

<table>
<thead>
<tr>
<th>Perception</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should subscribe to print journals</td>
<td>40.0% (48)</td>
<td>60.0% (72)</td>
</tr>
<tr>
<td>Should subscribe to e-journals</td>
<td>60.0% (72)</td>
<td>40.0% (48)</td>
</tr>
<tr>
<td>Should subscribe printed +e-journals (Both):</td>
<td>60.0% (73)</td>
<td>40.0% (47)</td>
</tr>
</tbody>
</table>

Figures in parentheses indicate response count in the sample survey.

Motivation to Use e-Journals: Most respondents (81.6%) use e-journals mainly for research pursuits. The other motivations for using e-journals are project presentations (11.6%), and keeping up to date in the
subject (6.6%). Interestingly, motivations for using journals in print media and in digital media are just the same. It implies that mode of publication media hardly plays any role in influencing scientists’ motivations to use journals (Table 2).

Table 3 Motivation for using E-journals

<table>
<thead>
<tr>
<th>Purpose</th>
<th>No Of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>For research work</td>
<td>98</td>
<td>81.66</td>
</tr>
<tr>
<td>For keeping up to date in subject</td>
<td>8</td>
<td>6.66</td>
</tr>
<tr>
<td>For presentation</td>
<td>14</td>
<td>11.66</td>
</tr>
</tbody>
</table>

Search Interfaces used to Access e-Journals: Most researchers (70%) use publisher specific platform as their first access option to search e-journals. Nearly 28.3 percent respondents use databases such as Web of Science, Scopus, Science Direct or other multi-journal databases as their first search interface. About 1.6% respondents use gateways such as Google, Yahoo, Alta Vista as their first interface to access e-journals and locate their URL to reach directly to appropriate publisher’s website.

Table 4: Search Interfaces used to Access e-Journals

<table>
<thead>
<tr>
<th>Search Interface used to Access e-journals</th>
<th>No of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateways such as Google, Yahoo, and other general purpose search engine</td>
<td>2</td>
<td>1.66</td>
</tr>
<tr>
<td>Publisher specific platform</td>
<td>84</td>
<td>70</td>
</tr>
<tr>
<td>Databases such as Web of Science, Scopus, Science Direct with links to full-text</td>
<td>34</td>
<td>28.3</td>
</tr>
</tbody>
</table>

Mode of Reading e-Journals Content: Most researchers (68.3%) read journal articles on pen drive or computer hard disk, while others (25.8%) print them on paper, and 4.16% read them directly online from the screen.

Table 5: Mode of Reading e-Journals Content

<table>
<thead>
<tr>
<th>Mode of Reading e-Journal Content</th>
<th>No of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directly Read from Screen</td>
<td>5</td>
<td>4.16</td>
</tr>
<tr>
<td>Take print out on Paper</td>
<td>31</td>
<td>25.83</td>
</tr>
<tr>
<td>Download content to Pen drive or any other medium</td>
<td>82</td>
<td>68.33</td>
</tr>
<tr>
<td>Any Other method</td>
<td>2</td>
<td>1.66</td>
</tr>
</tbody>
</table>

Frequency of using e-Journals: Most respondents (79.16%) browse e-journals daily, 12.5% weekly, 3.3% monthly, and 5% occasionally. It implies that digital media has made it feasible for scientists to browse journals as frequently as everyday, a sort of desire that scientists had been harboring for long but were unable to fulfill the same since they have temporal limitations due to which they could not come to visit library daily.

Table 6: Frequency of using E-journals

<table>
<thead>
<tr>
<th>Frequency</th>
<th>No of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>95</td>
<td>79.16</td>
</tr>
<tr>
<td>Weekly</td>
<td>15</td>
<td>12.5</td>
</tr>
<tr>
<td>Monthly</td>
<td>4</td>
<td>3.33</td>
</tr>
<tr>
<td>Fortnightly</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Occasionally</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Relevancy of e-Journals: Majority (81.6%) responded that information that they get to access from e-journals was most relevant and useful to them in meeting their research needs, 17.5 percent felt that information retrieved was just useful, and 0.83 percent felt it as not useful.

Table 7: Relevancy of e-Journals

<table>
<thead>
<tr>
<th>Information Access</th>
<th>No of Responses</th>
<th>Percentage</th>
</tr>
</thead>
</table>

210
| Most useful  | 98 | 81.66 |
| Just useful  | 21 | 17.5  |
| Not useful   | 1  | 0.83  |
| Others       | 0  | 0     |

Satisfaction level: Most respondents (60.83%) are satisfied with the breadth of e-journals in the collection available in the subject areas of their research pursuit.

Table 8: E-Journals Collection and Respondents’ Satisfaction

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>No of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>73</td>
<td>60.83</td>
</tr>
<tr>
<td>No</td>
<td>47</td>
<td>39.16</td>
</tr>
</tbody>
</table>

Place of access to e-Journals: Nearly 72.5 percent respondents routinely access e-journals directly from their office place, 15 percent visit NPL Central Computer Facility, and 12.5 percent NPL Library for the purpose. This implies that traditional role of the library as a place of information search and access is largely marginalized. This also implies that digital media has sought to extend the boundaries of open access system of the library from its four walls to the entire NPL campus.

Table 9: Place of Access to e-Journals

<table>
<thead>
<tr>
<th>Place of access</th>
<th>No of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central/Main Library</td>
<td>15</td>
<td>12.5</td>
</tr>
<tr>
<td>NPL, Central Computer facility</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Any other Library</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hostels</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>At home</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Office place</td>
<td>87</td>
<td>72.5</td>
</tr>
</tbody>
</table>

Problems in Accessing and Using e-Journals: Most researchers (91.6%) responded that difficulty in reading digital content online was one of the strongest barriers to use e-journals. Nearly 81.6 percent found slow internet speed as a big problem, 76.6 percent found that library lacked specialized services, and 39.7 percent lacked familiarity with e-resources. Nearly 35 percent responded that library lacked appropriate e-resources to meet their information needs, 25 percent attributed lack of training on how to access and use e-journals as a serious problem. Nearly 20 percent scientists complained of slow Internet speed, and 19.1 percent still find computer terminals were not available in sufficient measure.

Findings:
The survey reveals that use of e-journals has been a huge success in improving research productivity at NPL. That all the researchers were aware of e-journal consortium facility at NPL demonstrate that the library had succeeded in its efforts to raise awareness about e-journals. Use of e-journals is more from office work place at NPL than from the library or CCF. E-journals use is predominantly for research pursuits, followed by their use for current awareness interests. Use of print and e-journals is still prevalent in the NPL. Major problem before scientists in maximizing sue e-journals are lack of training on how to use e-journals, slow internet speed for downloading, and insufficiency of computer terminals. However, it is a common feeling that, e-journals will not replace the traditional print format but rather complement it as a new medium of communication.

Conclusion:
The use of e-journals at National Physical Laboratory is growing and it is mainly because scientists are finding it more convenient to use e-journals online from their office place. E-journals have in a way sought to extend boundaries of open access system from four walls of library to whole NPL campus. The other factors for growing use of e-journals are relevancy of e-journal collection under the CSIR consortium and smooth shift from print to digital resources. The suggestions to maximize use of e-journals collections made by scientists are indeed important and deserve due consideration by top management at NPL. The apprehensions that e-journals will replace the traditional print journals are unfounded but rather they will continue to complement new medium of communication. The shift from print to digital era has brought out new challenges before the NPL library in planning and building a hybrid library and redefining library staff roles in the emerging context.
Acknowledgement:
The Authors are thankful to Dr S M Dhawan, former Head, Library, National Physical Laboratory for encouraging to write and help in analyzing the data for the article.

References:
1) www.nplindia.org
2) ALA Glossary of library and Information Science, p125

E- Learning on DELNET: An Overview.
Tupe Raju Ramdas. (M.I.I.Sc.; SET), Librarian, M.S.P. Mandal’s, Group of Institutions, Deogire Institute of Engineering & Management Studies, Aurangabad. Email: - rajutupe1211@gmail.com

Abstract
This research paper discusses on the overview on DELNET in point of view with E- Learning. Every library subscribed the E-Journals or consortium. The DELNET is simple tool for e-learning. It’s give the information about services, software, database, resources & history of DELNET.

Introduction:- E-learning comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked or not, serve as specific media to implement the learning process. The term will still most likely be utilized to reference out-of-classroom and in-classroom educational experiences via technology, even as advances continue in regard to devices and curriculum.

E-learning is essentially the computer and network-enabled transfer of skills and knowledge. E-learning applications and processes include Web-based learning, computer-based learning, virtual classroom opportunities and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It can be self-paced or instructor-led and includes media in the form of text, image, animation, streaming video and audio.

Abbreviations like CBT (Computer-Based Training), IBT (Internet-Based Training) or WBT (Web-Based Training) have been used as synonyms to e-learning. Today one can still find these terms being used, along with variations of e-learning such as releaming, Learning, and learning. The terms will be utilized throughout this article to indicate their validity under the broader terminology of E-learning.

Use of E-Resources in SRTM University: A Review

*R.G. Dharmapurkar , **Mohran K. Katkar

Abstract-Now day's e journals are in use, at a high rate. It is because of spread of internet facility, increase in online consortia culture and user friendly e resources access technique (UFEAT). Researchers on university and college levels are making maximum use of it. Students and teachers are also next to them. The credit of making these e resources popular among the Indian universities goes to UGC-INFONET digital library consortium, which is promoted by INFLIBNET and supported by UGC. N-LIST is also one of the current popular projects of INFLIBNET designed for Indian colleges. Present article highlights the use of UGC-INFONET digital library consortium made by the researchers, teachers, and students in SRTM University, Nanded.

Keywords- UGC-INFONET, E-resources, Swami Ramanand Teerth Marathwada University.

Introduction:The Swami Ramanand Teerth Marathwada University was established at Nanded by bifurcating the Marathwada University, Aurangabad on 17th September 1994, the day on which 1948 Hyderabad State was liberated from rule of the Nizam. Nanded is a district headquarters as well as a holy city situated on the banks of Godavari River in southeastern part of Maharashtra state. The University has