Past decade has witnessed enormous changes in the Health Science Libraries both in its outlook and functions. The health information professionals and users consider health information resources as the backbone of Health Science Libraries these days. The **Objective** of this paper is to see the future perspective of electronic vs. print resource in India. A survey has been conducted in North and South Indian institutions to know the information-seeking behavior of the users, who are using e- resources like e-books, e-journals, databases, subject gateways, multi-journal Websites with links to full text, such as PubMed, Ovid, Science Direct, MEDLINE. Evaluation of the quality of information possessed by these resources is also discussed in the context of Credibility, Authority, Accuracy, Objectivity and support of this information. ICT has accelerated the growth of literature manifolds. **Consequently** health information resources and literature is getting doubled within 2-3 years along with elevation in cost. This rising cost of scholarly resources has encouraged the formation of consortia all over the world. Consortia initiation in India, consortia approach, features, need, pricing models, technology paradigm, problems associated with consortia and solutions are discussed from the exposure of two major consortia of India namely UGC-INFONET and HELINET. **Concludes** with the observation that our profession is growing with the emergence of medical librarians, as medical information officers, medical information experts, and chief information officers. On the other hand our profession is graying in the absence of this ICT in some regions of India

**INTRODUCTION**

Medical library and information professionals ensure that health care providers have access to reliable, relevant, accurate, up to date and timely published information that enhances the quality of health care. Due to the needs of medical professionals for high quality information, medical libraries have been the early adopters of electronic resources. Twenty first century is known as information society. The rapid growth of information had posed a new challenge to the libraries, which has led to the sea change in the information-seeking behavior of the users of the library. This information-seeking behavior has led to the transformation of librarians into information professionals. Passion of these
information professionals to satisfy maximum needs of the users has further led to the formation of consortia all over the world. In the phase of print media user had no choice except going to the library and search books, journals and archives which in turn was very time consuming. With the invention of E-resources users felt relaxed and their inclination to the E-resources was natural because of the exclusive benefits of the E-resources. Then the invention of online data bases followed by E-journals has changed the job of librarian and information seeking behavior of the users. User community became the end beneficiary of these resources. Chronologically we can divide these resources specifically journals print, on-line with print, only on-line, on-line databases (which provide cross-links to related articles and other websites/gate ways etc). There are many types of E-resources like E-books, E-journals, various open sources database like PUBMED, MEDLINE, and publisher databases like OVID, Science direct, Proquest etc. In the era of ‘E’, readers’ demand has become significant as they need an article or topic but at the same time they prefer to search online databases to fulfil their needs. Still, concern remains over the quality of Web resources, particularly among faculty and librarians who fear students use the Web indiscriminately. Information professionals and users suffer from the problem of too much of information, from a wide range of resources, and too little time to find, manage and evaluate. Sometimes users search Internet indiscriminately without knowing the facts. Here information professionals transformed from librarian play an important role by making the users aware of the importance of the evaluation of this retrieved information by guiding them, how to retrieve, what to retrieve and how to further use that retrieved information, which is called evaluation of information.

1. EVALUATION OF THE INFORMATION

Working in an environment that has been profoundly affected by technology, the information professionals are mastering the use of sophisticated electronic resources and maintain a constant focus on the nature, quality, and ethical uses of information available in these.

- As most scholarly journal articles pass through a peer review process, whereby several readers must examine and approve contents before it is published. So the scholarly journals can be considered as the most trusted source of published information.

- Statements issued in the name of an organization have almost always been seen and approved by several people and competent authority as well.

So far as the information through the Internet is concerned one should be very careful while retrieving the information and further using the same. Following four factors should be considered before using it in any field.
Following 4 points are must to consider while searching for the information.

- **Credibility** -
  
  Trustworthy source, author’s credentials, evidence of quality control, known or respected authority, organizational support are the measures to check the credibility.

- **Accuracy**:
  
  Up to date, factual, detailed exact comprehensiveness of the source.

- **Reasonable**:
  
  Fair, balanced, objective, reasoned, no conflict of interest. A source that engages the subject thoughtfully and reasonably concerned with the truth.

- **Support**:
  
  Listed sources, contact information, claim supported, documentation supplied. A source that provides convincing evidence for the claims made, find at least two other sources that support it.

**Points to be taken care while further using the information.**

- **Challenge**:
  
  Challenge information means one should ask the accountability. Who says so? Why was this information created? Why should I believe it? How is it known to be true? Is it the whole truth?

- **Adapt**:
  
  Adapt for quality to fit the importance of the information and what is being claimed. Require more credibility and evidence for stronger claims.

- **File**:
  
  Do not immediately believe or disbelieve it. Do not jump to a conclusion immediately. Wait until more information comes in if you have time to wait.

- **Evaluate**:
Evaluate and re-evaluate regularly. New information or changing circumstances can affect the accuracy.

This information explosion, diversity of user need, financial crunch and impossibility of self-sufficiency has led to the formation of consortia at local, regional, national and international level.

2. **CONSORTIA APPROACH**

Library consortium is a collective activity of a group of libraries towards a common goal of resource sharing. With the availability of the state-of-the-art information technology solutions and the web revolution, libraries are now becoming high-tech through meaningful cooperation among themselves. The consortium approach is a win-win situation for all its stakeholders – users, publisher and libraries – all alike.

This strategy has led to the creation of an International Coalition of Library Consortia (ICOLC) with Yale University Library as the coordinating center. ICOLC currently has a membership of 150 Library Consortia around the world. INDEST and FORSA consortia from India are the members of ICOLC. Consortia offer several benefits including the following:

**For Libraries** (involved in the consortia)

- Access to otherwise un-subscribed materials.
- Scope for electronic archives.
- Availability and monitoring of usage statistics.
- Getting deep discounts through joint pricing negotiations – hence lower the unit cost of information.
- Reduced storage costs.
- Developing common resources databases.
- Effective document delivery system.
- A single interfaces and accesses point.
- Enhanced search facilities.
- Better scope for developing a union catalogue among participating libraries, etc.

**For publisher**, the consortium offers reduced attrition, improved income stability, incremental revenue, and greater visibility of their products.

**For users**, users are the ultimate end beneficiaries of such initiatives.

In the above process a librarian had played an important role to satisfy various kinds of user needs. How information-seeking behavior of users has been
constantly changing from print phase to era of ‘E’ and increasing demand of various databases has encouraged forming consortia.

This information explosion, diversity of user need, financial crunch and impossibility of self-sufficiency has led to the formation of consortia at local, regional, national and international level. Following initiatives have already been taken in India to satisfy the rapidly increasing demands of the users and to improve the higher education system.

2.1 CONSORTIA INITIATIVES IN INDIA.

So far as India is concerned, various initiatives have been taken to facilitate global access to Science, Technology and Medical (STM) information and dissemination of scientific knowledge base to a wide spectrum of audience which is going to be widened and improved in the days ahead.

Following are three main consortias of India named UGC INFONET, HELINET AND INDEST.

2.2 UGC-INFONET

Indian higher educational system is one of the biggest systems of the world. By 2008 India has 413 universities. In addition there are 20,677 college including 2166 that are for women only. At the beginning of 07-08 the total no. of students enrolled in these colleges were 116.13 lakhs (11.6 million) out of which about 40 percent are women. It has been reported that about 11000 Doctorate degrees are being awarded in different disciplines every year. Most of this research is not qualitatively up to the standard at international level. To solve this critical issue ‘University Grants Commission’ has initiated a program called UGC-INFONET.

It was decided by UGC to place state of the art infrastructure within the university and also connect the same with other parts of the world for proper flow of communication. Education and Research Network (ERNET) has been given the responsibility to establish the local area network in the universities. So far 149 universities have already been connected through this national program.

INFLIBNET will focus to envelop around 5000 colleges across the country. It has already been decided that 200 Universities and 5000 colleges across the country would be considered for providing access.

2.3 HELINET

HELINET stands for Health Science Library and Information Network. It has been established in the state of Banglore. The concept is adopted by RGUHS (Rajiv Gandhi University of Health Sciences,) Bangalore, India in 2001
to network all health science libraries under its affiliation and develop a consortium for resource sharing.

The e-Journal Consortium is the first major program initiated by HELINET. The professional health education system in the State produces annually 15,450 health science professionals which includes 2,990 Medical Doctors, 2,159 Dentists, 3,381 Nurses, 2,368 Pharmacists, 1,217 Physiotherapists, etc. There are a larger number of colleges offering graduate and post-graduate courses in Indian medicine like Ayurveda, Homeopathy, etc. There are 221(Approximately) medical colleges currently offering graduate and post-graduate programs in the country.

Indian Doctors represent a significant number in UK and USA. In the wake of the liberalization of Indian economy and its globalization over the last one decade, the health education and service sector in the country has emerging as a major exporter. All the medical colleges affiliated to the university are the members of the HELINET. Total member of the consortia till Jan 2009 is 669, which includes both private and Govt. colleges. The University has created a HELINET Fund. Each member library contributes an annual membership fee to this fund.

HELINET has already caught the attention of other Health Science Universities in the country. As its effort mature within RGUHS, HELINET will launch its HELENET extended version to other Universities and Health Science Institutions in the academic sector. The goal is to make HELINET a national consortium for health science E-Resources.

2.4 INDEST

The Ministry of Human Resource Development (MHRD) has set-up a Consortia-based Subscription to Electronic Resources for Technical Education System in India on the recommendations made by the Expert Group appointed by the ministry. The consortium is named as the Indian National Digital Library in Science and Technology (INDEST) Consortium. The INDEST Consortium has commenced its operation since Dec. 2002 through its headquarters at the IIT Delhi. The Consortium subscribes to full-text electronic resources and bibliographic databases for 38 leading engineering and technological institutions in India including IITs, IISc, NITs / RECs, IIMs and a few other institutions directly funded by the Ministry of Human Resource Development (MHRD). While the expenditure on electronic resources proposed for subscription under the consortium for these 38 institutions are being met from the funds made available by the MHRD, the consortium being an open-ended proposition.

The Ministry of Human Resource Development (MHRD) has allocated funds required for providing access to selected electronic resources for a core group of institutions directly funded by the Ministry. 244 engineering colleges and
institutes have already joined the consortium on their own recently. It may be noted that full-text resources and databases proposed for subscription for various categories of institutions in the consortium would have amounted to Rs. 164 crores as per their list price. While through the consortium, the total cost comes to Rs. 18.60 crores for all institutions being considered under the consortium, total overall saving of Rs.145.40 crores.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Name</th>
<th>Members</th>
<th>URL</th>
<th>Resources</th>
<th>Amount Rs. In Crores</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>HELINET(RGUHS, Karnataka)</td>
<td>669</td>
<td><a href="http://www.rguhs.ac.in/hn/newhell.htm">http://www.rguhs.ac.in/hn/newhell.htm</a></td>
<td>1.600 E-Journals 2.913 E-books 3.JCCC</td>
<td>8 Approx.</td>
</tr>
<tr>
<td>3.</td>
<td>INDEST (MHRD)</td>
<td>182 + self supported members.</td>
<td><a href="http://paniit/iitd.ac.in/indest/">http://paniit/iitd.ac.in/indest/</a></td>
<td>1.6500 E-Journals 2.23 Databases. 3.JCCC</td>
<td>19 Approx.</td>
</tr>
</tbody>
</table>

The above said is the India scenario of the journey from print media to the era of ‘E’.

3. **OBJECTIVE OF THE STUDY**

A survey has been conducted in North Indian Medical and Technical Libraries through a questionnaire to know the changes in the information-seeking behavior of the users in this era of E and Consortium. How inclination towards electronic media increased. Questionnaire was circulated among 100 medical, technical professionals and librarians. Out of which 72 are medical professionals and research scholars, users of medial and scientific literature in various forms. 28 are librarians. Base of the questionnaire was e-journals.

4. **OBSERVATIONS (USERS)**

Thirty respondents (41%) reported frequently visiting a medical library, 18 (25%) rarely visited, and 24 (33%) never visited; 1 respondent did not answer this question.

Respondents (Students) in their first year reported frequent visits to the library (18/33, 55%) more often than those did in their second year (8/33, 24%).
In the overall group, those who never or rarely visited a library (42/72, 58%) indicated that E-resources are not sufficient (27/72, 26%); documents that they needed were not available (11/72, 26%) or libraries were not needed because of the Internet (11/72, 26%).

Most respondents reported performing database searches independently (58/72, 81%). Among those who did their own searches, MEDLINE and PUBMED was the best-known and most frequently used database (51/72, 71%) only 1 of 72 respondents did not know of MEDLINE. HINARI is being used by some users but the main problem with this database is that site is very slow.

When asked about criteria for selecting references, the most important factors were free full-text availability (56/72, 77%) with the demand of online database and formation of consortia.

Regarding access to the full text, few respondents said they visit a library to check document availability (18/72, 25%), ordered articles through a library (under resource sharing) (12/72, 16%). More than half of respondents preferred electronic tools for literature searching (40/72, 55%). Like open source sites, databases subscribed through the library and under consortia if library is the member of the same.

Although the advantages are outweighing the problems, users still express some concerns about the disadvantages of electronic library collections.

Several problems were identified in the information searching process. Many respondents noted difficulties in choosing among the large number of documents retrieved in searches (41/72, 56%), and lack of time was also noted as a problem (32/72, 44%), doubt about the existence of relevant information, retrieval of too much information, and difficulties with navigation and searching.

The most common complaint found is the discomfort of reading from the screen. Yet most indicated they preferred to print the documents (67/72, 93%) rather than read them online (9/72, 12%).

The top three hindrances mentioned were, the availability of too much of information (56%), Lack of time (44%) online access is time consuming (15%), it distracts from doing work (14%) and lack of information technology knowledge hinders effective use 25%(PGs).
Problems faced by the respondents while using Electronic library collection is shown in the following table and graph.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Type of problem</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Too much of information</td>
<td>56</td>
</tr>
<tr>
<td>2.</td>
<td>Lack of time</td>
<td>44</td>
</tr>
<tr>
<td>3.</td>
<td>Time consuming</td>
<td>15</td>
</tr>
<tr>
<td>4.</td>
<td>Distracts from doing work</td>
<td>14</td>
</tr>
<tr>
<td>5.</td>
<td>Lack of ICT knowledge</td>
<td>25</td>
</tr>
</tbody>
</table>

Specific change observed is the preference of electronic documents over the print.

It is very clear from the table 1(figure 1) that 10% of this user community is still interested in Print only journals. 18% needs Print and Online both. 28% preferred only Online.13% required only articles no matter which the form is, and 29% recommended Online journals with various online databases and cross-links to various sites and publishers. So we can say that 75% of the users preferred E-resources in one form or the other.

Preference of the Respondents regarding the forms of documents shown in the following table and graph.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Form of documents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Print</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Only Articles</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>Print and Online</td>
<td>18</td>
</tr>
<tr>
<td>4.</td>
<td>Online only</td>
<td>28</td>
</tr>
<tr>
<td>5.</td>
<td>Online and Databases</td>
<td>29</td>
</tr>
</tbody>
</table>
Following are the common Benefits of E-journals observed from the user point of view.

- Online E-journals are available at any time from anywhere with Internet access.
- You can search the text of the whole e-journal with cross-links and related articles, not just the title of the journal or article.
- E-journals often have enhanced features, such as multimedia and links to other E-journals, back files and web sites.

4.1 OBSERVATIONS (LIBRARY PROFESSIONALS)

Information professionals have observed the following changes in the information-seeking behavior of the users in the era of E.

- Users read articles from a wide variety of journal titles and sources if available to them in addition to the open sources.
- Personal subscriptions to journals continue to decrease, so users rely more on electronic subscriptions subsidized by the library and on the Internet.
- Most e-journal users still print out articles that are judged useful – so a printing format such as PDF is popular.
- Subject expert use hyperlinks to view related articles
- Searching by topic in an article database is important for all.
- Most journal article reading are from within their first year of publication, but a sizeable minority of readings come from materials that are older than one year as many publications are available free after a particular time.
- Students use the Internet more than the library for research, and many believe they are more expert at searching than their teachers.
Findings of this study show that in terms of information seeking, today's researcher seems to be comfortable with using a wide variety of resources. Scholars are more likely begin their search at a multi-journal Website with links to full text and databases, such as PUBMED, MEDLINE, publisher databases like Ovid, Science Direct, HighWire, than at a specific journal. Internet search engines, E-print services, author Websites, full-text databases, electronic journals, and print resources are all used to some extent by most of the users. Convenience remains the single most important factor for information retrieval. Speed of access, ability to download, print and send articles are top advantages of electronic journals for all groups.

Although there are some contradictions in the findings of recent research study on information seeking behavior with e-resources, a clear message emerges is that almost every user need E- resources in one form or the other.

5. **MAKE OVER OF LIBRARIES**

Users now no longer visit the most trusted and tested path to the nearest library. Physical visit to a library is falling day by day. Some times this brings the feeling that our profession is graying. Attendance at the Indian Institute of Science (IISc) library has fallen to 150 from 500 per day in 2001.

But is it really to worry about? Not really, say those who seems to know better.

Digital libraries have replaced physical ones. Instead of spending hours at stuffy libraries, scholars are reading books and searching the required reading material online in their comfort zone. Also, many institutes reported a steep climb in the number of scholars visiting digital libraries. IISc is a fine example. In 2004, its digital library got 12 lakh hits — the number of times a website is accessed. The figure rose to 39 lakh in 2007, a rise of 225% in four years.

Consortia of libraries — IIMs, IITs, NIDs and IISc — got 43 lakh hits in 2003. This jumped to 2.42 crore in 2007. Well, that's an impressive 562% increase. And this results in publication of more articles. IISc in 1970-74 produced 600 articles per year. This rose to 2,000 during 1983-86. With digital libraries in place, the number reached 5,000 per year.

Librarians see this trend in a positive way. "With more content being made accessible and without the library's time constraints, scholars have more resources at hand to produce more work. This in turn has increased research output, benefiting scientists. Digital libraries are also popular in medical colleges."
HELINET has attracted many readers over the years. Before launching HELINET, RGUHS conducted a survey in many medical colleges, which revealed, colleges spend between Rs 10 and 15 lakh as subscription fee to journals on an average. Even with this amount, they would get only 50 to 60 international journals. "The survey clearly showed the need for more journals at affordable rates," he said. "Some colleges have good libraries and they spend Rs 50 to Rs 60 lakh on 120 journals." Under HELINET, RGUHS bought international journals at only 10 to 20% cost of the original print, which means the university uploads over 500 journals per year.

Our contribution in the above discussion and further growth in research as out put of this contribution, gives us the feeling that our profession is growing.

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