Chapter-3

Online-Journals
INTRODUCTION

In the past two decades the cost of new information technologies, particularly online and CD-ROM and shrinking library budgets have had a combined effect on academic libraries failing to fulfil their mission as information providers. But the recent advances in computer applications have brought radical changes in the way the information is generated, stored, organized, accessed, retrieved and consumed. The development in information technologies has brought online-journals as a boon to research community, which are becoming a major source for scholarly communication.

An online-journal is defined as the grouping of information that is sent out in electronic form with some regularity. It covers any serial or serial like publication available in electronic format which is produced, published and distributed nationally and internationally. It is applied to the library services as full-text and as an access to information about individual journal articles.

1.1 ELECTRONIC PUBLISHING (EP)

Innovation of Internet in information processing and dissemination has almost converted the world into an electronic village, the e-village has expanded to e-publishing and selecting, evaluating and providing intelligent access to electronic information available on the web. The emergence of e-publications would eliminate the use of publications would eliminate the use of paper and transportation costs and will enable to handle complex information.
The term ‘Electronic Publishing’ refers to the art to distributions of information. E-publishing is a process where the manuscripts are submitted in electronic format, edited, printed and submitted in the electronic form and even distributed to potential user/reader through a cyber net.

Electronic publishing can be defined as a process for production of typest, quality documents, containing text, graphics, pictures, tables and equation etc. with the assistance of data processing system. The synonym for EP is computer aided publishing in computer assisted publishing.

According to F.W.Lancaster (1995), “Electronic publishing is as publication process where the manuscripts are submitted in electronic format, edited, printed and even distributed to readers in electronic form by employing computers and telecommunication technology”.

According to Kist E-publishing as “The application by publishers of a computer aided process, by which they find capture, shape, store and update information content in order to disseminate it to selected audience”.

### 1.2 NEED OF ELECTRONIC PUBLISHING

Books and periodicals provide a powerful medium for storage, retrieval, display and communication of information. Despite their tremendous utility, there are many reasons why one should now consider a partial shift away from the use of conventional paper based books, the great use of publication that are based on the use of electronic media. With the rapidly emerging era of digital information and communication technologies, one has to consider the use of more extensive use of e-publication:
1) To provide access to complicated or seldom used database.

2) Providing community conferencing and message centre programmes.

3) To provide online access to information on library resources.

4) To provide access to community information locations for referrals.

5) To provide access to high demand information and materials viz- computer and videotext; and

6) To provide access to electronic resources for those who cannot afford to have computer or terminals.

1.3 TYPES OF E-PUBLISHING

Electronic publishing has text, graphics, images, sound and video in a multimedia format. Technical tools for the production of EP are powerful and has large installed base. Copies of e-documents are equal or better than the original without any loss of quality. E-documents are tied with the development in the technology in terms of maintenance and preservation. These documents can be distributed over the net, which is equal to having the document at every place. The major forms of e-publishing are as follows:-

1.3.1 CD-ROM (Compact Disc Read Only Memory)

1.3.2 Electronic Books

1.3.3 Floppy diskettes

1.3.4 Database

1.3.5 Multi Media Documents

1.3.6 Internet Resources
1.3.7 Bulletin Board System

1.3.8 Online-Journals

**1.3.1 CD-ROM (Compact Disc Read Only Memory)**

CD-ROM technology is hardly a decade old, extending into wide areas of information storage and retrieval. "The CD-ROM consists of a polycarbonate substrate on which the data are recorded as series of pits and flats which represents IS and OS in magnetic media". The laser beams are used to record the data on the surface on the disc. A thin reflective layer coats the back of disc to reflect the laser beam. The CD-ROM discs are now available in different size like 4.72 inches and 3.5 inches.

**1.3.2 Electronic Books**

An electronic book is usually a collection of digital objects on documents. Which in turn are packaged and formatted with the intention of being displayed on a handled device or read by a speech generating application. There are huge numbers of e-books all round the globe but all e-books are not embedded with resources. So e-book selection is very important thing. E-books can save spaces and less costly than paper books.

**1.3.3 Floppy diskettes**

The Floppy diskette was developed in the early 1970s as a cheap and fast alternative to storage on magnetic tape. It is a small reform access disk, which like all secondary storage devices cab be used both for input and output operations. The disk is made of flexible plastic and coated with magnetic oxide. There are two reorganized standard sizes of 8 inches and 5.1/4 inches frequently referred to as diskettes and mini-floppy respectively.
1.3.4 Databases

A database is an organized collection of related data. The organized database serve as a base from which desired information can be retrieved and many meaningful conclusions can be drawn.

A database can be defined as a computerized collection of logically related data records about something, that are stored organized or structured in the computer in such a flexible manner that it enables people to get information out of it very quickly.

1.3.5 Multimedia Documents

Multimedia refers to the integration of multiple media such as visual imaging, text, video and sound and animation in one level. On another level interactive multimedia refers to the ability of the users to control these components and interact with as needed.

Multimedia is the convergence of computer and communication technology. It refers to the use of several types of media which integrates text, voice processing, film, animation etc.

1.3.5 Internet Resources

The internet is literally becoming a lifeline for people. It is changing the notion of the library from a closed place to virtual library. The internet is a large number of computers connected to the largest and complete tool for information exchange at the global level.

The internet is the greatest single factor is recent years which has changed and is further changing the society starting with basic tools like e-mail, File Transfer Protocol (FTP), remote begin (Telenet) to user friendly tools like Gopher, WAIS and WWW for information
publishing and accessing. Internet has emerged as the core and foundation of the information infrastructure.

1.3.6 Bulletin Board System (BBS)

Bulletin Board system is a miniature form of an online system for a cost effective distribution of information in electronic format. BBS supports interactive communication between users on a wide variety of a subject ranging from hobbies to politics. Some bulletin boards are considered more of a talk net than a platform to exchange research information.

2. ONLINE-JOURNALS

Online-journals are simply serial publication in which the end products are made available in digital format and whose contents may or may not be peer-reviewed. Two media viz. CD-ROM and Internet are used for the dissemination of the online-journals. The main advantage of the CD-ROM is that in libraries and information centres, it can be handled just like the conventional printed form.

Online-journals are often referred to interchangeably as “electronic publishing”, “electronic journals”, “and electronic serial”, “paperless journal”, “virtual journal”.

The first scholarly journal titled “Journal De Scavans” was published in 1665 as a new medium of communication. For more than three centuries journals played a pivotal role in the creation, dissemination/transmission of knowledge and have remained unchanged essentially in its form and function over its life.

Scientific and scholarly journals are today being published in many media: CD-ROM, Floppy disk, on computer networks such as the Internet and print.
Although online-journals have been under development since 1976, but the first peer-reviewed electronic full text online journals including graphics were Online-journals of Current Clinical Trials (OJCCT) (Keyhani 1993).

2.1 DEFINITIONS

There is no universally accepted definition of online-journal. The experts in these fields gave the definition of online-journal on the basis of production, distribution etc. Some recognised definitions are given here under:-

**ALA Glossary (1983)**: “A journal is a periodically scholarly articles or disseminating current information on research and development in a particular subject field”. If this task is done by electronic media than it may be called online-journals.

**David Pullinger and Brian Schkel (1990)**: define online-journals as “one whose text input may be entered directly by a computer or by other file transfer mechanism in a machine readable form, whose editorial processing is facilitated by a computer and those article are thus made available in electronic form to readers”.

**Mc Millan (1991)**: An electronic journals is defined as “any serials produced, published, distributed........via electronic net works such as Bitnet and Internet”.

**Lancaster (1995)**: opined that “an electronic journal is created for the electronic medium”. In general the online-journals can be defined as “a

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journal that is available in electronic form through online host called online-journal”.

**Glossary of Library and Information Science (2004)**⁴: “an electronic journal is a publication often scholarly, that is made accessible in a computerized format and distributed over the internet”.

### 2.2 HISTORY AND DEVELOPMENT

Approximately 200 years after the invention of printing press by Johanne Guttenberg, the first Scientific journals appeared almost simultaneously in London (philosophical Transactions of the Royal Society) and Paris (Le Journal de Scavans) in the year 1665.

Lancaster (1995) gives an account of Sondak and Schwarz (1973) being first to conceive an electronic form of the scholarly journals. Their vision was distribution of computer readable “archival files” of journals to libraries and distribution of computer output microfiche to individual subscribers.

Presently, we have the internet and the World Wide Web (WWW) which drives the activities of online-journals at a much accelerated speed. These steps correspond to the three types of electronic journals that Woodward and McKnight (1995) identify: online, CD-ROM and networked journals. Online-journals are available through online hosts such as DIALOG and BRS. They are not very likely to be part of library collections due to high costs. CD-ROM journals are usually full text of individual or collected journals in a variety of subjects. They are mostly electronic versions of existing printed journals. Networked electronic

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journals are based on mailing list software or client/server computing applications, including Gopher and WWW.

There is an exponential growth in the number of online-journals. The seventh edition of the Association of Research Libraries, Newsletters and Academic Discussion Lists (1997) contains 3,400 serial titles; while 1,465 of them are categorized as online-journals. There are 1,049 peer-reviewed electronic journals compared to 417 in the 1996 edition. The number of electronic journals increases from 700 titles in the fifth in 1994. Since electronic journals are proliferating extensively, they appear in most academic disciplines. The major broad categories are science, technology and medicine, arts and humanities and Social Sciences.

2.3 CHARACTERISTICS OF ONLINE-JOURNALS

The online-journals have brought about momentous changes in journal publishing and are revolutionizing libraries. The process of selecting and acquiring journals is far more complex and cumbersome than the selection process for print journals. Subscription to an online-journal includes careful review and analysis of many factors, such as licensing agreements; vendor vs. aggregator package; print plus-electronic access vs. electronic only access; library only, campus-only and of campus access; and content coverage. Some of the distinguishing characteristics of online-journals are:

1) Can be used simultaneously by more than one user.
2) Provide timely access.
3) Support searching capabilities.
4) Accommodate unique features such as links to related items.
5) Save physical storage space.
6) Contain multimedia information.
7) Do not require physical processing.
8) Environment friendly.
9) Automatically generate alerting and other secondary services.
10) No mutilation or destruction to pages as in print counterpart.

2.4 TYPES OF ONLINE-JOURNALS PUBLICATIONS

There are currently two types:

2.4.1 Offline CD-ROM version
2.4.2 Online or Internet based journal

2.4.1 Offline CD-ROM Version

CD-ROM represents a way of digitally storing large amount of information in a way that’s easy to search and retrieve. CD-ROM has high storage capacity and reliability. It is cost effective medium of doing computerized literature searching. It is portable and has ability to store graphic data. The most important advantages of a CD-ROM is that if the CDs are on network the same can be shared by unlimited number of users, sitting at far off places at their door steps.

2.4.1 Online or Internet based journals

Online-journals are available through online hosts such DIALOG at high costs. They are not likely to be part of library collections. An online-journal allows remote access. It can be used simultaneously by more than one user. It provides timely access. Online-journals support different searching capabilities and save physical database.
2.5 CLASSIFICATION OF ONLINE-JOURNALS

On the basis of the distribution methods the online-journals can classified as follows:

2.5.1 **Classic online-journals or Internet online-journals:** Some of the online-journals are available, which are also called classic journals. Originally they were distributed via- e-mail but now are available on the web and only announcements of new issues and distributed by e-mail. Access to this category of journal is free of cost.

2.5.2 **Parallel online-journals:** These types of journals are published simultaneously in both forms print and online. The online version may include the full text of journal, only table of contents (TOC) of selected articles and excerpts from the print version.

2.5.3 **Database Model and Software Model:** Under the Database model articles reside in a centralized database maintained by the publisher and subscribers are given permission to access the database and use search software on central computer to locate and download articles. The software model provides a piece of software, which runs on internet connected computer and connects to the database to the journals central computer. The users can search and download information, which will be sent in proprietary encrypted form. The software would have an expiration date that corresponds with the length of the subscription.

2.5.4 **CD-ROM Journals:** Commercial publishers have also made journal titles available on CD-ROM. The full text of journals and newspapers has been made available on CD-ROM. In many cases
these titles duplicate print titles held by the libraries. Libraries have often subscribed to journals both in print and in microform.

2.6 ADVANTAGES OF ONLINE-JOURNALS

The advantages of online-journals can be discussed as follows:

1) The speed of publication and delivery of the journal issues is much faster than the print versions.

2) Inclusion of audio and video base text in the journal issues is possible.

3) To access and retrieve relevant articles; a good number of search engines are available.

4) Downloading and printing of relevant articles at the end user workstations is possible.

5) Online-journals have solved many problems of libraries such as space shelving, missing issues, missing pages and cutting of the pages etc.

6) Multiple access and access through local networks becomes easy.

7) Provide hypermedia linkages, i.e., linkages to the related articles cited in each article and other useful sources.

8) Help in minimizing the problems related to the conservation and preservation of journals.

9) Cost of publication and distribution is less than the print versions.

10) Alerting the users regarding the publication of new issues and articles of their interest becomes earlier in electronic media.

2.7 DISADVANTAGES OF ONLINE-JOURNALS

There are also some disadvantages of online-journals such as:
1) The psychology that proper, being a more permanent medium is more authentic than e-media.

2) The lack of originality.

3) Difficulty in citing the web based journals on articles due to volatility of medium.

4) People are still not accustomed to reading off the computer monitor and prefer to take a printout.

5) Economic barriers.

6) Difficulty to remember password.

3. LIBRARY CONSORTIA

With the application of IT there has been a growth of documents in print as well as electronic format. The consequence of this growth no is able to procure process or store the entire documents that the library user demands. Neither of the libraries can afford to acquire even half of all published materials.

To solve this problem library co-operation started long ago, such as library networks, Inter Library Loan (ILL), document delivery, but at present the more accepted system of resource sharing is library consortia that have come into existence with a wide coverage.

3.1 CONSORTIA

A consortium is said to be “a cooperative arrangement among groups or institution” or ‘an association or society’ (American Heritage Dictionary). Consortia are commonly formed to increase the purchasing power of the collaborating institutions to expand the resource availability and to offer automated service.
According to Webster’s 3rd New International Dictionary: a Library consortium is "an agreement, combination, or groups formed to undertake and enterprise beyond the resources of anyone member".

Library consortia can either be formed bodies with government statues, funding and explicit staff. These are often setup on a national or state wide level or can be a group of similar working in the same subject field e.g. UGC-INFONET, INDEST etc. open consortia, an informal group brought together for the purpose of central purchasing of online-journals, often under the auspices of a publishers or subscription agent, e.g. Spinger. Group of libraries come together with common interest to form consortium. One of the libraries or agencies work as co-ordinator for identification of libraries for each publishers, negotiation, legal etc. The aim of consortia is to achieve what the members of the group cannot achieve individually.

3.2 NEED FOR CONSORTIA

The following reason leads to the reason why we need the library consortia:

3.2.1 Population Explosion

There is innovation in medical research due to advancement in science and technology, lead to the reduced rate of mortality resulting in the population explosion.

3.2.2 Knowledge Explosion

In various universities, research institutions industries and other academic institutions various scientist and research scholars are working to develop new knowledge in various discipline; new innovative subject areas, this lead to knowledge explosion.
3.2.3 Document Explosion

When knowledge is generated it is sent to the journals to get published in the form of printed journals and electronic media. As a result there is document explosion.

3.2.4 Limited Financial Resources

Finance is one of the most important factors in making a good library. A library funds itself in a different position to procure the entire document requirement for its users within the budgetary limits due to high initiation and using trends of currency conversion.

3.2.5 Diversity of user needs

The requirement of information vary with the user i.e. student require books for educational purpose while a scientist may need advanced documents all such requirement cannot be made available in a single library.

3.3 ADVANTAGES

The advantages of library consortia are the following:

1. Helps to overcome the problem of financial constraints.
2. Enable cost-effective selection and comprehensive collection development programme.
3. Helps to avoid duplication in collection.
4. Every library can make use of holdings of participating libraries.
5. Helps to improve the services by exploiting the unimaginable range of e-collection.
6. Resource sharing will reduce the cost of collection development among the libraries.
7. Easy access to resource sharing on internet by creating database among the libraries.

8. Sharing of professional experts among member libraries.

9. Small libraries can drive more benefits out of their small budgets.

3.4 consortia initiatives: Indian scenario

Many library consortia around the country have been formed on different lines. They range from informal gathering of library of professionals for the purpose of sharing information and promoting a united front to more formally organized operations. The following consortium is active in India.

3.4.1 FORUM FOR RESOURCE SHARING IN ASTRONOMY AND ASTROPHYSICS (FORSA)

Most probably FORSA is the first consortium in Indian context launched in 1981 at present FORSA has eleven members. The objective of FORSA includes facilities access to online-journals and book database merging of member libraries hold digitization of archival material etc. It is subscribing 25 online-journals to Indian Astrophysics consortium.

3.4.2 CSIR CONSORTIUM

Council of Scientific Industrial Research (CSIR) consortia has 40 laboratories across the county, the major objective of which is to strengthen CSIR library resource by pooling sharing and providing electronic access to research scholars and scientists of CSIR laboratories and to promote the culture of electronic access. National Institute for Science Communication and Information Resource (NISCAIR) was identified as the coordinator of CSIR consortium and CSIR has also
entered into contact with Elsevier Science to enable access to all the laboratories to the 1200 online-journals published in Elsevier.

3.4.3 INDEST CONSORTIUM

INDEST is a consortium of 38 members of Engineering institutes located at different states. INDEST is under the Ministry of Human Resource Development (MHRD) as per the recommendation of the expert group headed by Prof. N. Balakrishnan. The group has set up "Consortia based subscription to electronic resources for Technical Education System in India". The consortium is named as Indian National Digital Library in Science and Technology (INDEST) consortium. Presently all the IITs, NITIEs, most of regional Engineering College and Indian Institute of Management's are its members. The consortium being an open ended proposition welcomes institution to join it on their own for sharing maximum benefits. It offers in terms of lower subscription rates and better terms of agreement with the publishers. This consortium is most ambitious initiative of its type so far in India.

3.4.4 UGC-INFONET

INFLIBNET has launched online-journal consortium on 6th August 2003 by President of India A.P.J. Abdul Kalam Azad, which is known as UGC-INFONET. This consortium has been set up by the chairman UGC to promote the use of electronic databases and full text access to journals by the research and academic community in the country. The faculty, research scholars and students of universities covered under UGC are the primary beneficiaries; however, this scheme will be extended to colleges very soon.

UGC will bear the entire expenses for UGC funded universities for providing online-journals access on behalf of participating
universities INFLIBNET Centre. Consortium covers all the discipline viz. pure sciences, social sciences and Humanities including management and language.

Under this consortium access to gateway portals is made available to the universities covered under UGC grants. These gateway portals provide access to journals in the area of pure science, social sciences and humanities with contents and abstracts and full text for major collections.

CONCLUSION

Online-journal will became increasingly important and it has the potential to transforming scholarly communication, opening up exciting new possibilities that were impossible in a print-based publishing system. To support research and teaching libraries need to greatly enhance expedited access to print materials, at the same time providing effective access to a growing array of online-journals.